

# AMERICAN BUILDER

## THE WORLD'S GREATEST BUILDING PAPER

### A SIMMONS-BOARDMAN PUBLICATION

Vol. 47.

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No. 1.

COPYRIGHT, 1929, BY AMERICAN BUILDER PUBLISHING CORPORATION

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**SUBSCRIPTION RATES**—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copy, 35 cents. Foreign countries, \$4.00.

**PROTECTION FOR OUR READERS**—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

Be sure in writing to advertisers to say: "I saw your advertisement in the AMERICAN BUILDER."

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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS  
AND OF THE ASSOCIATED BUSINESS PAPERS



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## Not One—but EIGHT Reasons Why—

the Improved Schlueter is "the Greatest of all Floor Surfacers":—1st, The Schlueter's steel roller *adjusts itself* to floor irregularities (by a patented suspension feature); 2nd, There are no weights to lift; 3rd, No levers to monkey with; 4th, The Schlueter surfaces right up to the quarter round; 5th, It has a long wearing link belt chain drive; 6th, Ventilated heavy duty motor (can't burn out); 7th, Positive suction gathers all dust; and 8th, It is guaranteed for Five Years. *No other surfacer has all these features!*

## Weight—Power—Guts

The Improved Schlueter is not an undersized "portable" (although you can take the motor off and carry the machine easily, if you wish). We make a portable flexible shaft sander for stairs and small jobs. But it takes the *Weight, Power, and Guts*, found only in a full size machine to eat away the surface of hard wood floors all day long, day after day—and do it right.

## Works for You—

The Improved Schlueter is entirely automatic. Snap on the switch—and the machine does the work for you. If you've ever "juggled" an old type machine around all day, you'll appreciate an "automatic" surfacer. You can enjoy your evening after a day's work with the Schlueter!

There are 4 models of the Improved Schlueter. Tell us what work you do, and we'll recommend the model that will do your work right. MAIL COUPON TODAY FOR FULL DETAILS OF EASY PAYMENT PLAN and FREE TRIAL OFFER.

Schlueter "Portable" Flexible Shaft Sander for Stairs and Small Jobs. Three leg or round base.



**LINCOLN-SCHLUETER**  
FLOOR-MACHINERY CO., INC.

233 W. Grand Avenue  
CHICAGO

Lincoln-Schlueter Floor Mch. Co.  
(Dept. A4) 221 W. Grand Ave.  
Chicago

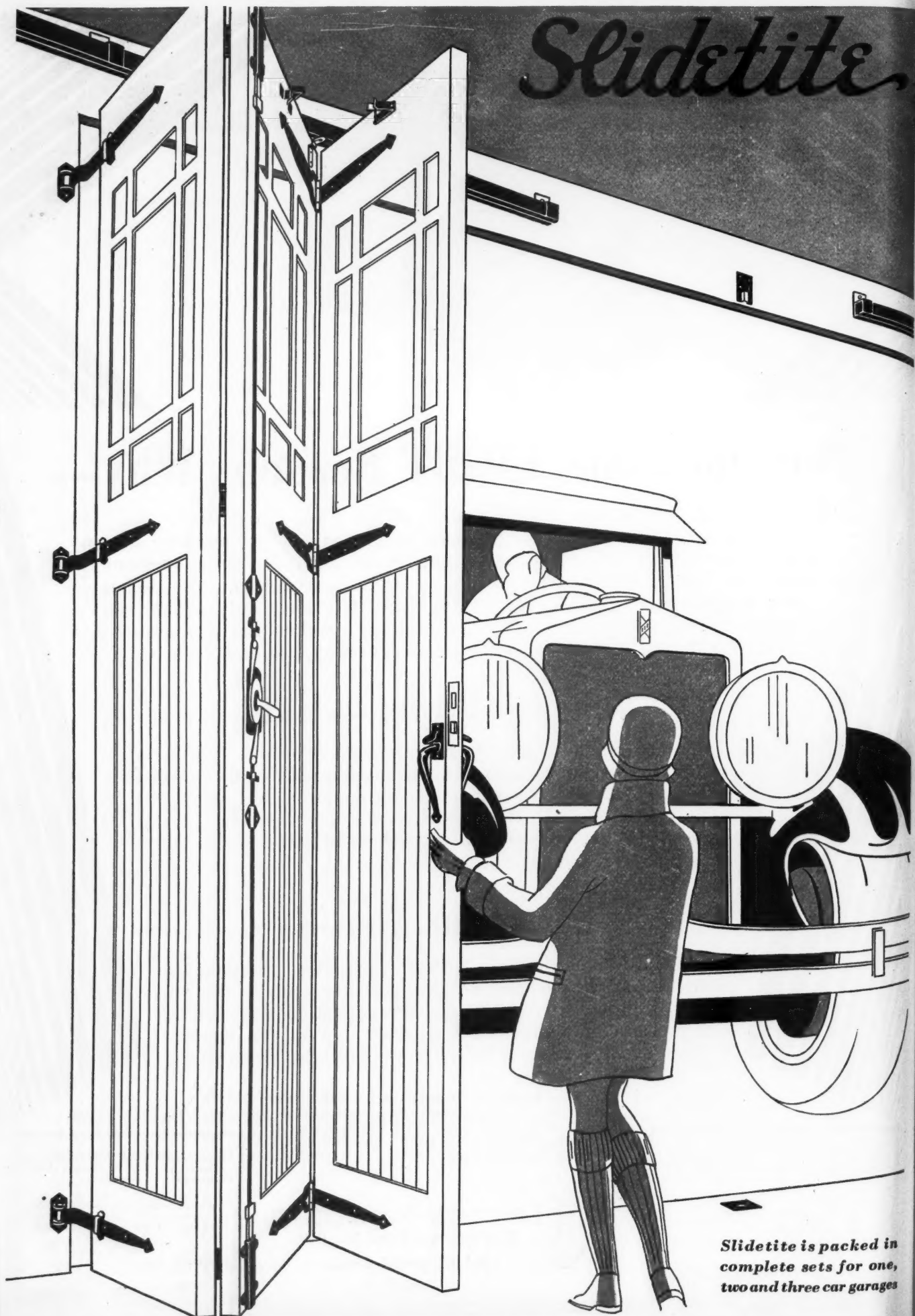
Gentlemen: I'd like to have full details about the Improved Schlueter (4 sizes) and about your Easy Payment Plan and FREE TRIAL OFFER.

Name.....

Address.....

City.....

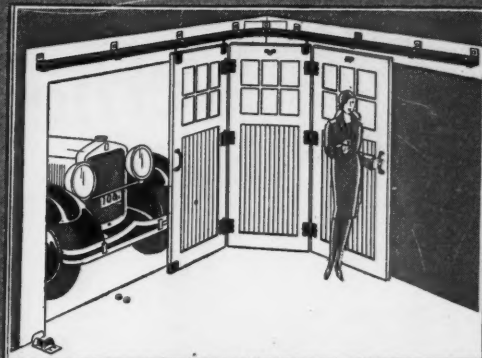




*Slidetite is packed in complete sets for one, two and three car garages*

# Doors slide inside

*...unobstructed,  
full width  
opening!*



*Sometimes a small garage has insufficient space for Slidetite folding doors. That's the place to use Slidaside equipment. The doors slide around the corner flat against the wall.*

If your garage doors swing out against packed ice and drifted snow...if they warp and stick and sag on their hinges...if there's a center post in the opening...

Then it's no fun trying to get in and out of your garage, especially in the winter months. Perhaps you've tried it!

But—if your doors slide inside on Slidetite equipment, leaving a full width unobstructed opening, *that's* comfort, *that's* convenience!

Slidetite is made for every kind of garage door need—one, two or three cars—and to fit openings up to 30 feet in width without center posts. Smooth, silent, quick, easy operation is what you want *and what you get* with Slidetite. A child can open and close Slidetite doors.

*Write for Catalog No. 55*

## Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides

New York . . . . . AURORA, ILLINOIS, U.S.A. . . . . Chicago  
Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines  
Minneapolis Kansas City Atlanta Los Angeles San Francisco Omaha Seattle Detroit  
Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. • Winnipeg

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# Meeting Public

THE SATURDAY EVENING POST

## The Overhead

January 2, 1929



THE "OVERHEAD" IDEA is the result of a public demand for a better door. It meets this demand by the approval of architects and building engineers, and the unqualified endorsement of the public.

THE "OVERHEAD DOOR" is adaptable to public and private garages, warehouses, factories and smaller buildings.

THE "OVERHEAD DOOR" glides upward in smooth tracks and is held in position by counterbalancing springs.

RAIL BEARING ROLLERS, mounted by counterbalancing springs, make it possible for a child to open or close the door with ease.

HOUSE IS truly a better door, a modern door, one combining all the best of old-fashioned doors, meeting no more than doors of the past. It is a door of the future. Doors to the Overhead Door Company.

THE "OVERHEAD DOOR" may be opened electrically from house or driveway, with the Overhead Door Control.

The modern home is not complete without a garage and no garage can be modern without an "Overhead Door."

Mail this coupon!

The Overhead Door Corporation, Hartford City, Indiana.  
 Please send me a complete catalogue showing the "Overhead Door" in its  
 latest form.  
 NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY \_\_\_\_\_

THE SATURDAY EVENING POST

## Door for the Modern Garage

There's an Overhead Door Company in your state

OPENS COMPLETELY out of the way!

The "Overhead Door" has these points of merit—

- Does not open.
- Does not close.
- Does not swing out.
- Does not swing in.
- Does not swing up.
- Does not swing down.
- Does not swing out.
- Does not swing in.
- Does not swing up.
- Does not swing down.

See Our Exhibits at The National Automobile Shows

**OVERHEAD DOOR CORPORATION**  
 HARTFORD CITY - INDIANA  
 U. S. A.



DOOR CLOSED

DOOR PARTLY OPEN

DOOR OPEN

**F**OR THE FIRST TIME in merchandising history a garage door has been accorded the dignity of a great national advertising campaign.

Before this nation-wide campaign was launched the "OVERHEAD DOOR," by sheer merit, was forging rapidly to the front. Now, with the tremendous impetus it has received from advertising, the "Overhead Door" has become a national institution.

In the homes you build this season tie in with this national friendliness and consciousness for the "Overhead Door"!

The modern home is not complete without a garage. No garage CAN be modern without an "OVERHEAD DOOR."

Sweet's  
 Architectural Catalogue  
 B2342-B2343

## The Buying Public and the "Overhead Door"

A product nationally advertised must be consistently good. It must be of proven merit and worth. The buying public, conscious of these facts, is placing supreme confidence in the scores of nationally advertised products. It is demanding that these products be used in the construction and equipment of the present day homes.

The public is being informed of the many merits of the "OVERHEAD DOOR" through an extensive national advertising campaign. This MODERN garage door has taken its place alongside of the hundreds of nationally recognized commodities of unquestioned reliability and worth.

Since it is a vital part of the modern home, the garage will do its part in satisfying the prospective purchaser and in effecting a sale of the property if it is equipped with MODERN doors. The "Overhead Door" is the only TRULY MODERN garage door.

# c Demand

## *for a Modern Garage Door*

IN the past the public has accepted as modern the products of the garage door industry. But, with this acceptance of what the industry had to offer the public continued to long for a garage door which could be depended upon to render complete satisfaction and uninterrupted service for years.

The public's conception of what a truly worthwhile garage door should be was one which could be easily and quickly operated—one which could not sag, bind, or warp—one which would harmonize perfectly with any style of architecture—one which could not become disengaged from its track or hanger—one which could be locked and unlocked from either side.

These exacting demands have been met by the "OVERHEAD DOOR"—the TRULY MODERN garage door.

This modern door offers to the public still more. Its method of operation has revolutionized garage door engineering. The "Overhead Door" opens up—OVERHEAD—COMPLETELY OUT OF THE WAY.

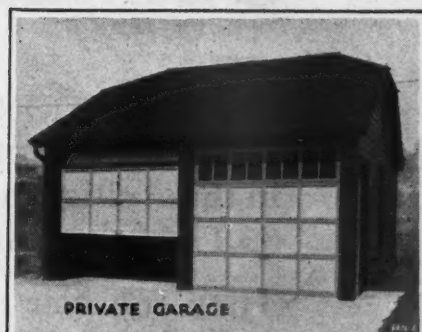
Installed upon the inside of the building, it affords the full height and width of the opening and makes available the use of every inch of floor and wall space within.

The fact that a child can operate an "Overhead Door" bespeaks its ease of operation. The elements—wind or rain, ice or snow—have no effect upon its smooth functioning.

When closed, the "Overhead Door" fits tightly at top, sides and bottom; when open it rests in horizontal tracks OVERHEAD.

Each "Overhead Door" is engineered to the particular opening. Each door is furnished complete with woodwork, track, hardware and lock assembled in units. Upon delivery the door is ready to install.

The "Overhead Door" may be had in any size or in any design, so long as the design does not interfere with the horizontal panel construction of the door.



PRIVATE GARAGE



APARTMENT GARAGE



PUBLIC GARAGE



HOME DE LUXE



OIL STATION

**OVERHEAD DOOR**  
CORPORATION  
HARTFORD CITY, INDIANA - U.S.A.  
OVERHEAD DOOR CO. OF CANADA LTD. - TORONTO, ONTARIO - CAN.



# DeWalts show big on thousands of

**I**NFORMATION gathered by the U.S. Department of Labor for the Bureau of Statistics and the Department of Commerce in three cities in different sections of the country reveals that 33.1% of all costs on residence construction goes to carpenter work.

Then consider that a DeWalt Wonder Worker saves about 25% of this labor cost—quite a saving even on small residences!

No other mechanical saw will do as much, have the power, the versatility nor the ease of operation of the DeWalt. It is worth all it costs and more to any Building Contractor and we can prove it by actual figures.

Let a DeWalt relieve your skilled carpenters of profitless, back-breaking handsawing and allow them to put in a full day on profitable work. They like it better—and so will you when you figure the actual dollars and cents savings effected.

*Write today for full details*

**DeWalt Products Corporation**

Leola, Penna.

*Sales and Service in All Principal Cities*

DeWalt Products Corp.,  
758 New Holland Ave., Leola, Pa.  
Please send me full particulars of the DeWalt  
Wonder Worker.

Your name.....

Firm name.....

Address.....

# DEWALT

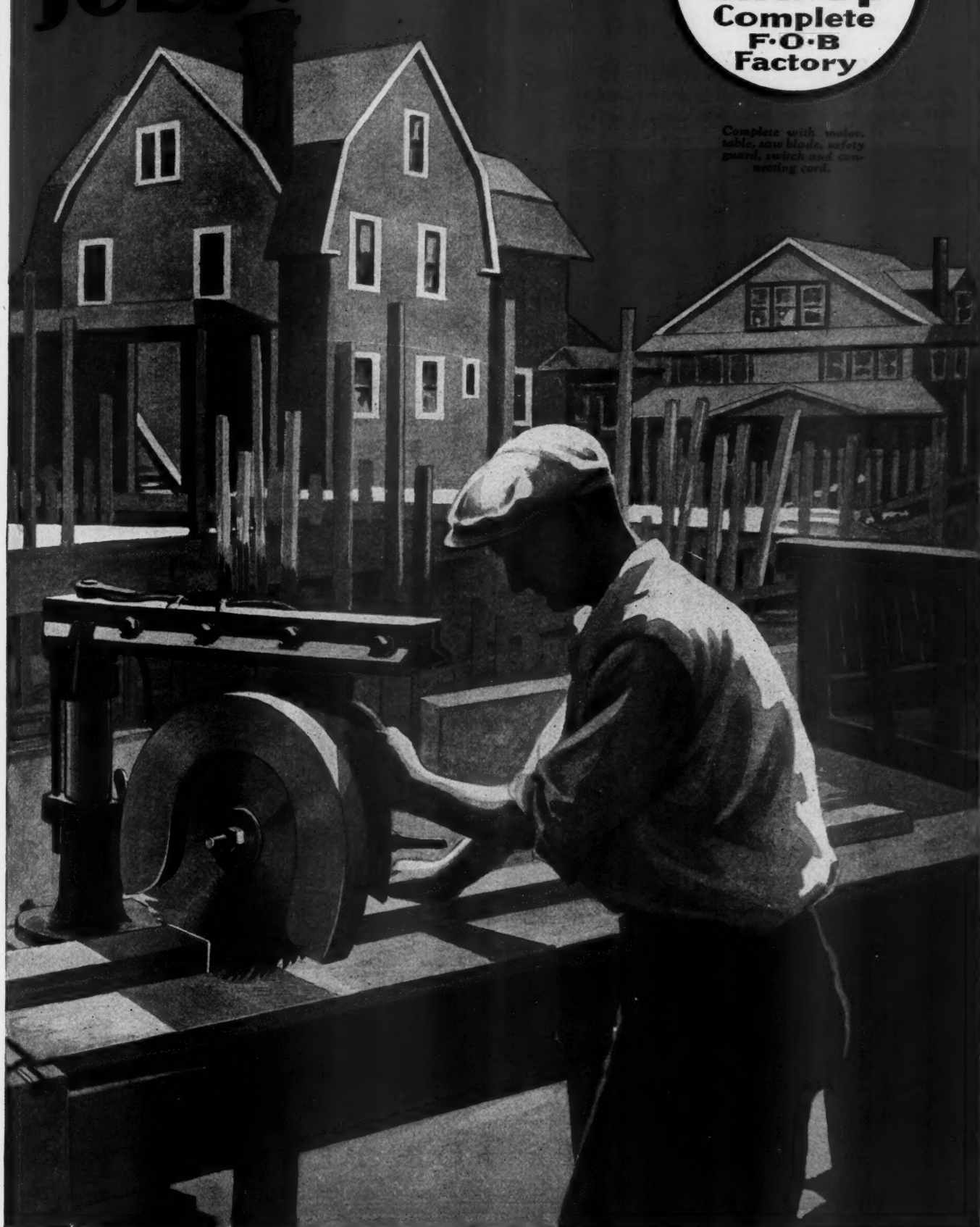
## Wonder Worker

The Economy Wood Worker

# savings jobs!

**PRICES  
\$195<sup>00</sup>  
and Up  
Complete  
F.O.B  
Factory**

Complete with motor,  
table, saw blade, safety  
guard, switch and con-  
necting cord.

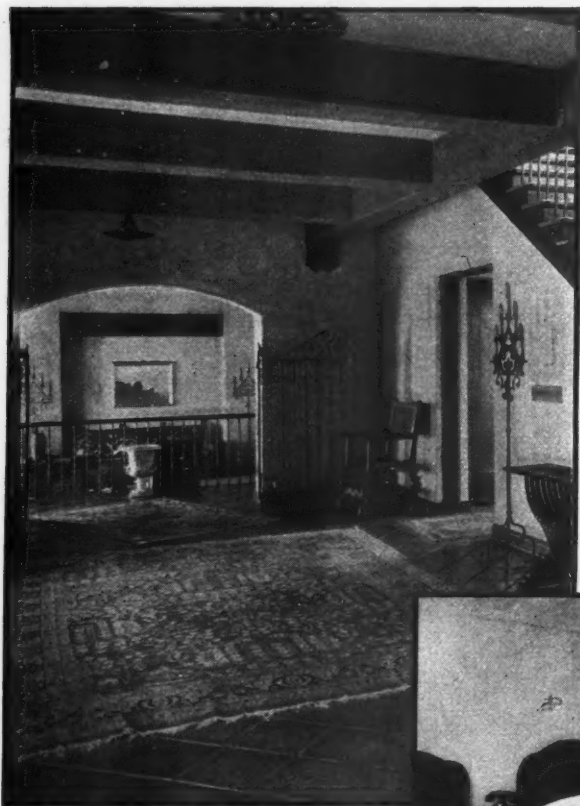


WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# The SELLING VALUE

*A wax-polished concrete floor needs no covering—other than rugs—and is very easily kept spotlessly clean.*



*In this bedroom, the concrete floor is overlaid with cork floor tile. There will never be any creaking floor here!*



*The concrete floor protects the furnishings of this living room from damage by basement fires.*

## PORTLAND CEMENT

### CONCRETE FOR PERMANENCE

# of CONCRETE FLOORS

**I**MMEDIATE interest is displayed by the prospective home buyer when you show him a house with a concrete floor. He feels that such a house *must* be well built. He likes the idea of greater safety from fire. He will, undoubtedly, be willing to pay more for a good house with trouble-proof concrete floors.

The finest apartment houses, hotels, and large homes have concrete floors.

Recently, they have been perfected for use in small homes, too.

Concrete floors are rigid and strong, reducing vibration caused by heavy traffic on streets nearby, or by the romping of children within the

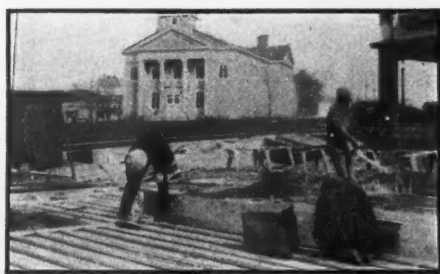
house. They will help to prevent settlement of interior partitions, sagging doors, and plaster cracking. Concrete floors retain the warmth of daylight hours during cold nights, and remain cool on a hot summer day.

Many strong "selling points" exist for the house that has a concrete first floor. These have been attractively presented in our book "The Key to Fire-

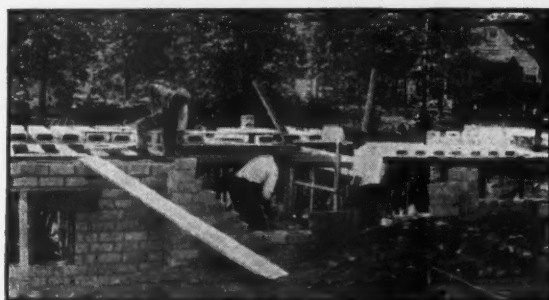
safe Homes." We would like to send you a copy—free. And to any persons you know who plan to build homes, we

will gladly mail a copy if you send us their names.

Take advantage of this offer!



*Laying sleepers over concrete first floor.*

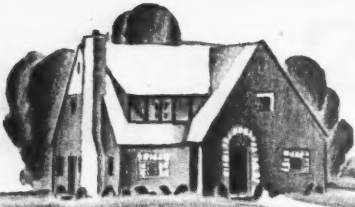


*Placing tile and joist concrete first floor.*

## ASSOCIATION *Chicago*

### ... AND FIRESAFETY





# For Better Homes



*In the Spring  
a father returns  
smiles upon the  
robin's breast;*

*In the Spring  
the season hap-  
ping goes himself  
another crest.*

*In the Spring  
a livelier iris  
changes on the  
burnished doe.*

*In the Spring  
a young man's  
fancy lightly  
turns to thought  
of love.*

— Alfred Tennyson

THE home of your dreams come true, a house is absolutely assured by a well placed radiator in every room. Such a home means for daily, practical use. The home of your dreams come true, a home whose uniform temperature of 70° throughout the entire

American Radiator Company  
accepts the undivided  
responsibility of supplying  
perfect and complete equip-  
ment for every heating need.

health and a longer, happier life. Such is the house of the home builder who, today, answers the beautiful, natural call to make a home.

## AMERICAN RADIATOR COMPANY

40 WEST 40TH STREET, NEW YORK  
AND ALL PRINCIPAL CITIES

My Name is \_\_\_\_\_

My Address is \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

I am interested in receiving . . .

☐ particulars of your convenient payment plan by which my home may be heated for less than \$75 a month.

☐ particulars of the Building and Loan Association financing plan.



ALL AMERICAN RADIATOR PRODUCTS

# AMERICAN RADIATOR

40 WEST 40TH ST.

Branches

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

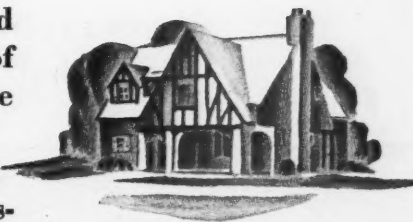
# and More Homes . . . One United Responsibility

**I**F there is any one thing that more than anything else can make for uncomfortable, discontented home owners, it is poor heating. And uncomfortable, discontented home owners are anything but enthusiastic boosters of home ownership among their friends. In consequence the building industry suffers.

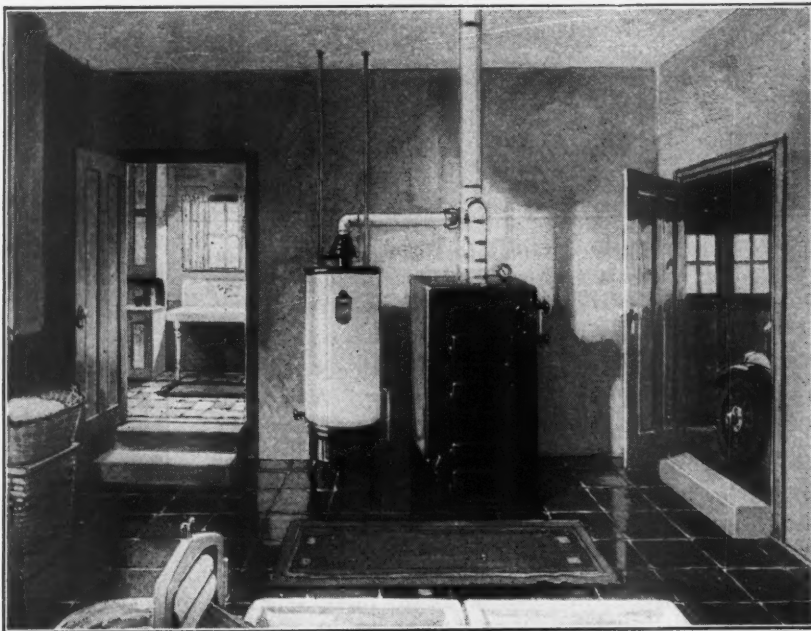
The initial cost of an American Radiator Heating Plant is only slightly above the cost of an unmodern heating system but—American Radiator Heating makes a house into a home where people like to live and bring their friends. And an American Radiator Plant lasts as long as the home itself, upholding and increasing its resale value.

American Radiator Equipment makes homes—sells homes—sells *more* homes. It protects the investment of the home owner and home builder.

Every part is designed to give perfect team-work and perfect heating. Recommend and install All-American Heating products. It pays.



Many a sale is made in the cellar or wing of a home equipped with an American Radiator Boiler and Water Heater. So clean and attractive is this equipment that it virtually adds another livable room to the home. It pays to advertise that fact too.



**ARE GUARANTEED PRODUCTS**

## COMPANY

NEW YORK CITY

Everywhere

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# Build One Stone Job this Spring!

An open invitation to builders from Indiana Limestone Company. Prove to yourself and to your community the remarkable opportunities afforded by sawed Indiana Limestone facing

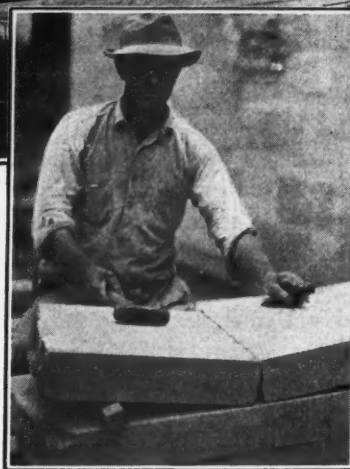


*Group of stores, Indianapolis, Indiana. Faced with Sawed Variegated Indiana Limestone Random Ashlar. E. H. Dalby, Designer and Contractor.*

**N**AME some of the construction projects you are going to be busy on this spring. What are they? A residence? Remodeling a store front? A school? Putting up a store and office building?

No matter what type of construction you are particularly interested in, there is a vital profit-story for you in Indiana Limestone Random Ashlar.

Builders all over the country who have tried it are making substantial profits and building a reputation for themselves by using this beautiful, light-colored natural stone for wall facing. Indiana Limestone Random Ashlar is used as a veneer over stud frame or as facing over hollow tile, just as brick, stucco or wood is used. A house faced with Indiana Limestone costs only 5% to 6% more than when other materials are used. These pictures show you some of the results obtained by the use of this stone.



*After a shallow groove, little more than a scratch, is made on the face of stone, the strip is turned over and a tap with a mallet breaks it cleanly along the line of the groove. An ordinary hand saw may be used if desired. One man with an electric saw keeps six stonemasons or bricklayers busy on the wall laying up stone.*

In Random Ashlar construction, the stone is sawed into strips four inches thick and of various heights at our quarries. It is sawed on four sides: face, back, top and bottom. These strips are shipped to the job. There they are broken, jointed and laid up in the wall. An electric saw or an ordinary hand saw is used to cut a groove in the stone. Then a tap with a mallet breaks it along the line of the groove. A stonemason or bricklayer does the laying up. No need for carefully prepared drawings. No cut stone required, unless used for trim. Even this may be omitted.

## INDIANA LIMESTONE COMPANY

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



*Residence, Marblehead, Mass., under construction. This house is being built of Old Gothic Indiana Limestone Random Ashlar with trim of Variegated Indiana Limestone. Wm. H. Quiner, Architect.*



*Store front, Louisville, Ky. Faced with Sawed Indiana Limestone Random Ashlar in combination with decorative cut-stone trim. C. J. Stinson, Architect.*

Leading contractors in various parts of the country are now taking up this new way of using Indiana Limestone. We are ready and able to give you all possible assistance in undertaking construction of a residence or other building of our stone. Here is a profit opportunity that is unusual. Get the jump on your competitors in this new field. Just one Indiana Limestone house or building will advertise you as nothing you have been engaged in to date has done.

### Mail Coupon

Just fill in your name and address below and we'll send you free booklet, together with full information about this new way of using Indiana Limestone.

Box 757, Service Bureau, Indiana Limestone Company,  
Bedford, Indiana.

Please send booklet and other information regarding  
Indiana Limestone Random Ashlar for residences.

Name.....

Street.....

City.....State.....

**General Offices: Bedford, Indiana • Executive Offices: Tribune Tower, Chicago**

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# confidence



*These items can now be purchased under the 4-Square label. Each carefully manufactured for the particular purpose for which it is intended.*

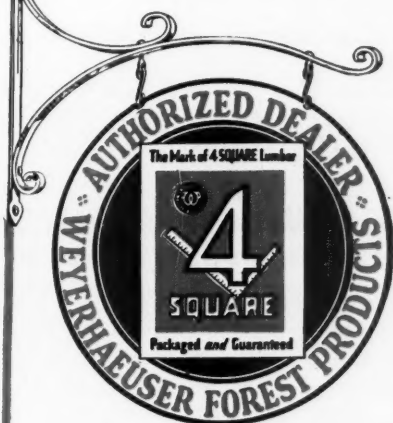
**Finishing Lumber**  
**Bevel Siding • Drop Siding**  
**Colonial Siding**  
**Softwood Flooring**

**Ceiling and Partition**  
**Shelving**  
**Stepping • Casing**  
**Base • Mouldings**

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

# is what gets contracts and sales

Build it by using Lumber of  
**GUARANTEED QUALITY** bought from  
a **4-SQUARE DEALER**



This sign of CONFIDENCE  
identifies the 4-SQUARE DEALER

**N**EVER before has the reliable contractor and merchant builder had such an opportunity as is offered by 4-Square Lumber, to prove his right to public confidence.

Here, for the first time, is lumber of nationally known and identifiable quality and value. Every package carries the 4-Square Label. Every label has on it the species and grade. The reliable contractor can prove that he delivers what he promises. He demonstrates that he has nothing to conceal by using the

lumber that carries its own mark of value.

4-Square Lumber is nationally advertised and is becoming rapidly known as the sign of a reliable contractor. You can readily see the advantage its use gives you in competitive bidding—how it can be made a *selling force* by the merchant builder.

Progressive lumber dealers everywhere are hanging out the 4-Square sign. If your dealer is not yet ready to supply you, write us.

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**ST. PAUL, MINNESOTA**

Weyerhaeuser Sales Co., Distributors, Spokane, Washington. District Offices:  
Minneapolis, Kansas City, Chicago, Toledo, Pittsburgh, Philadelphia, New York

# 4 SQUARE LUMBER

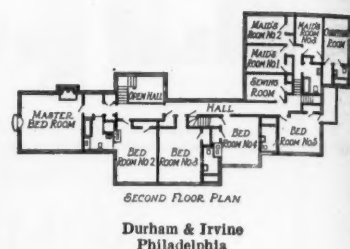
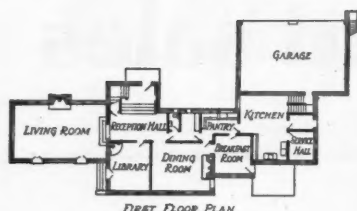
*Species and Grade are Marked and Guaranteed*

**TRIMMED SQUARE.. PACKAGED.. READY TO USE.. GUARANTEED**

**SOLD BY**

# 4 SQUARE DEALERS

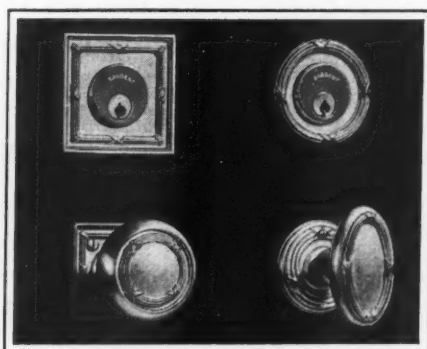




*Sargent Hardware adds much to the beauty,  
the service, and the salability of all your building operations*

YET IT COSTS LITTLE MORE THAN ORDINARY HARDWARE THAT  
WILL NOT WEAR WELL

HOME owners, generally, wish the details of their homes to express their individual ideas of convenience and decoration. Many have been convinced of the importance of hardware by experiences with bothersome locks that do not work smoothly, and with rust-streaked woodwork. They are now most anxious to have their new home, whether they buy it or build it, equipped throughout with the best hardware. Sargent Hardware is



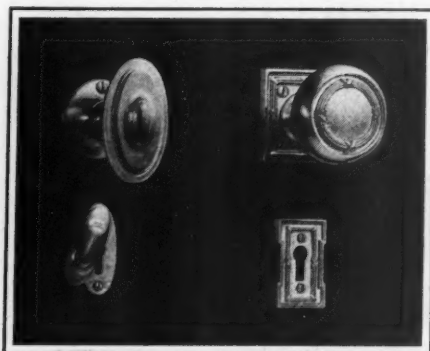
Door Knob No. 1825FA, Rosette No. 1FA; Door Knob No. 1913FD with Rose No. 175FD, Rosette No. 1FD.

recognized for its excellent quality, and its smooth, certain operation.

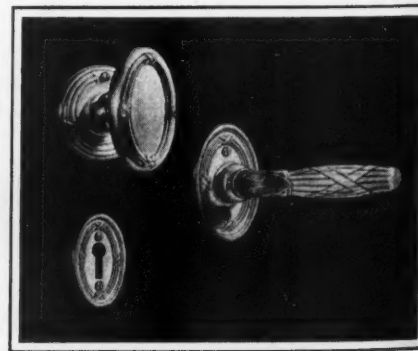
For the French-type dwelling pictured above, Sargent prescribes the hardware designs illustrated—each piece perfectly machined of solid brass or bronze, beautifully finished and non-rusting. Many Sargent designs offer a wealth of choice for every type of residence.

Sargent Hardware of brass and bronze costs surprisingly little more than plated steel hardware

that will not prove satisfactory. Complete equipment for the dwelling shown is only about 2% of the total building cost—varying somewhat, however, for different sections of the country, and according to design and type of construction. Our illustrated booklet, "Hardware for Utility and Ornamentation," will be sent you on request. You will find it interesting and instructive. Sargent & Company, 51 Water Street, New Haven, Conn.



Door Knob No. 1984, Key Plate No. 584; Door Knob No. 1822FA, Key Plate No. 870FA.



Door Knob No. 1912FD with Rose No. 175FD, Key Plate 870FD, Lever Handle No. 1155FD.

**SARGENT**  
LOCKS AND HARDWARE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

SHOP WORK

# FLOORS

FINE FINISH



**The CLARKE SANDS Them BETTER  
—In LESS TIME—At LOWER COST**

**W**HAT Clarke says is absolutely guaranteed in writing. If the Clarke Vacuum Portable Sander doesn't do precisely that, you get your money back. No other sander ever built can give any such written guarantee of performance. Clarke does. Thousands of contractors—big builders, small builders in every section of the country—own this sander. They've found it does better work, does it faster, at lower cost than any machine at any price. The Clarke is utterly unlike any other sander on the market. It's a piece of advanced engineering—years ahead and covered by the basic Clarke Patents. No wonder more Clarke sanders are bought today than any other sanding machine on the market.



varnish remover and at the rate of 300 to 1,000 feet a day. Try and match that performance with any other machine. Only the Clarke will do it.

## Light Socket Operation

The Clarke runs off a light socket. No extra power line needed. That's more economy for you. It's built to the highest engineering standard ever conceived by a sander manufacturer. Precision made—of the finest materials and workmanship throughout. As carefully balanced and assembled as a Rolls Royce.

## Get the Free Facts

Get the facts about the most remarkable piece of sanding equipment ever built. No obligation or cost of any kind. You'll profit if you act at once. Send coupon today.

## Faster and Better Work

31 pounds complete is all this remarkable Clarke sander weighs. It licks the transportation problem—no truck needed to get the Clarke to or from work. 8 hours sands 800 to 2,000 square feet of new floor. Perfect work, too—work you'll be proud of and can talk about in selling a house or landing a contract.

For bench work it weighs but 22 pounds. **And it does everything any sander can do, and does it fast, smooth, perfect!**

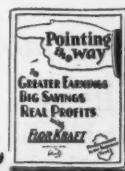
In remodeling work the Clarke is invaluable. It cuts through 2 or 20 coats of old varnish without the use of neutralizer or

Without Varnish Remover  
or Neutralizer, the

**Clarke Removes  
2 Coats or 20 Coats**

Floor varnish	Liquid wax
Flat varnish	Floor oil
Gloss varnish	Paint
Spar varnish	Shellac,
Floor stain	etc.
Floor wax	

**FULL FACTS  
FREE  
MAIL COUPON**



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Please send me, without obligation,  
full facts about the Clarke Vacuum  
Portable Sander.

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# FOR EVERY TYPE OF HOME YOU BUILD THERE'S AN AMBLER ASBESTOS PRODUCT

**Y**OU'LL find an Ambler Asbestos Product to fit any purse. Be it cottage or castle that's planned, you can quote with the knowledge that you're recommending the best.

Fireproof Ambler Asbestos Shingles are made in three general styles and eight attractive colors. Prices range from the low-cost serviceable "honeycomb" type to the distinctive "English Thatch" with its rough texture and deep delightful shadows.

Colors include Green, Pearl Gray, Purple, Indian Red, Tuscan Red, Buff, Black and Newport Gray. We can recommend many charming combinations.

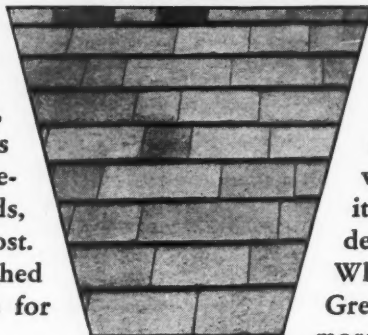
## *Linabestos*

**L**INABESTOS is an ideal sheathing for interior or exterior use. It's fireproof and extremely durable. Briefly, it's a vermin-proof wall board that's easily worked with saw and hammer. Being less porous than cheaper wallboards, it may be painted readily without high cost. It can be sandpapered to a highly polished finish. An indented finish is available for bathrooms.

Linabestos comes in sheets 48"x48", or 48" by 96", and  $\frac{3}{16}$ ",  $\frac{3}{8}$ " and  $\frac{1}{4}$ " thick.

## *Ambler Asbestos Lumber*

**T**HIS is a heavier fireproof board used in industrial plants, schools, bath-houses, partitions and doors. It is sanitary, fireproof and everlasting; highly resistant to acid fumes and impervious to moisture.



**W**HETHER it be a new home or a remodeling job—country estate or tiny bungalow—there is an Ambler Asbestos Product at your service.

No repair expense—no danger from fire—no wearing out—these are some of the advantages. These products combine the protection of asbestos with the long life of cement; actually they improve with age.

## *Waltile*

**W**ALTILE is the latest addition to the Ambler Asbestos family. It has had a wonderful reception; advertising has brought in thousands of inquiries which you can turn into sales.

Waltile is made of asbestos and cement, with a highly glazed surface. It comes in sheets 32"x48",  $\frac{3}{16}$ " thick, scored every 4 inches for tile effect. It will make the dreariest room cheery with its decorative tints, meeting the modern demand for color. Its colors include White, Cream, Pink, Smoke, Black, Apple Green and Nankin Blue. Let us tell you more about it.

## *Corrugated Roofing and Siding*

**A**MBLER ASBESTOS Corrugated is used extensively by industrial concerns for roofing and siding factory buildings and warehouses. Like the other Ambler products, its base is asbestos and cement. Every contractor doing industrial work should ask for our 1929 Engineers' Data Sheets.

Address Inquiries to

**ASBESTOS  
SHINGLE, SLATE & SHEATHING  
COMPANY  
AMBLER - PENNA.**

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## Bid for "buyer-acceptance"

The problem that faces a builder should not be to sell a house, but to *build a house that sells itself*.

Nationally advertised products that are established in quality recommend themselves. Any home owner likes to put his money in plumbing, heating or paint that he knows is *better quality* ... that will give him *more satisfactory service*.

To use Sherwin-Williams Finishes on the houses you build, and to make it *known*, is to create buyer-acceptance. For sixty years millions of home owners have preferred this famous old

"quality" line for its *richer beauty* and *longer service*.

Sherwin-Williams Paints, both exterior and interior, will mean *economy* to you as well. Their greater covering power and easier application reduce both material and labor bills.

See Sweet's Catalog for help in planning your Sherwin-Williams specifications. Our technical staff will also gladly assist you.

**THE SHERWIN-WILLIAMS Co.**

Largest Paint and Varnish Makers in the World  
Dept. 720—601 Canal Road, N. W. CLEVELAND, OHIO

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PAINTS  
VARNISHES

ENAMELS  
OPEX LACQUERS

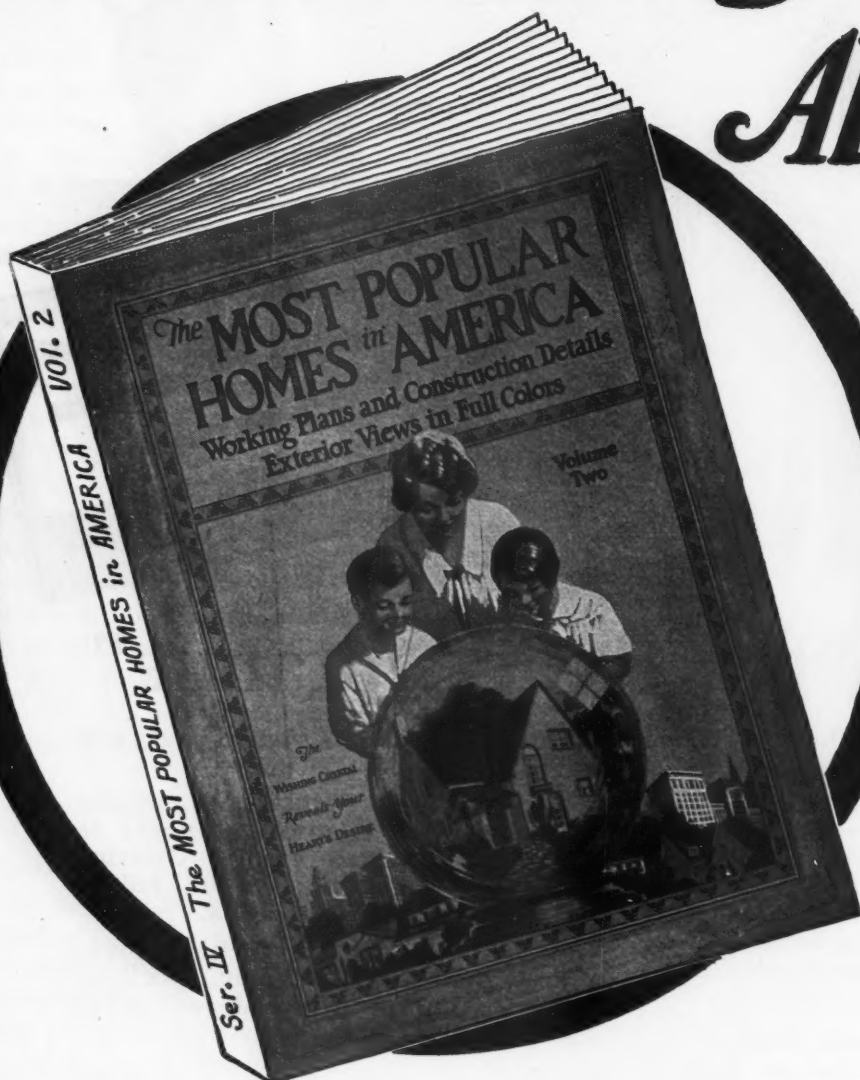


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### "Most Popular Homes In America"—VOLUME TWO

is a companion book to *Volume One*, which has had a phenomenal sale in the past year. *Volume One* has been repeatedly called the most beautiful and useful home design book ever printed.

The newbook, "*Volume Two*", is even more beautiful in appearance and contains 20 more full color plates than *Volume One*. If you already have *Volume One*, you will certainly be delighted with *Volume Two*.

We have on hand only a limited number of this new book—they are going rapidly. If you want yours, send for it now, *today*, before the supply is exhausted.

## 15 Sets of Complete Building Plans

**FIFTEEN** of the home designs in this wonderful book have complete working drawings, scale one-eighth inch and larger. You can build direct from these drawings, thus giving you an architectural service worth a neat sum of money, yet we include them in this wonderful book and send it to you absolutely free of cost.

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MILLVILLE, N. J., home built by the Goodwin Brothers. "We have used Laminex doors in most of our 'Better Built' homes . . . a real saving," says Raymond Goodwin. "We find we never have to go back on the job to refit or rehang a Laminex door"

# Who goes back to fix doors nowadays?

NOT the builders of these jobs...  
nor thousands of other contractors...  
nor will you do it again once  
you try Laminex

SACRAMENTO, CALIF. home, Laminex equipped because Frank Maloney discovered "after having a great deal of trouble with ordinary doors, my problem has been solved with Laminex doors. I do not have to return to refit them, which reduces the cost of my jobs, reduces the cost to the owner"



THE old complaint—"The doors are sticking!" Or that other howl—"They've shrunk or warped or something and won't latch." Do you still hear them—ever?

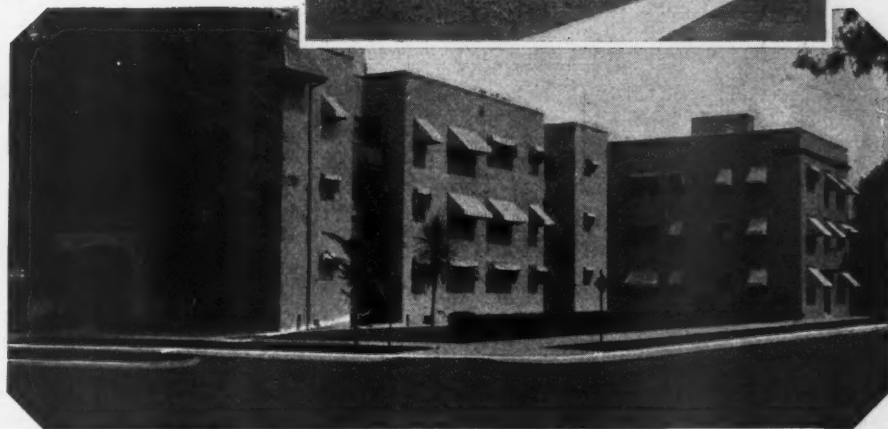
If you do, read how a great many contractors today are *avoiding* those kicks. We quote several such builders on this page. We could tell you about thousands of others.

Door trouble is the thing Laminex doors were specially designed to eliminate. These doors don't stick because they are built so they will not swell.

And they always latch because they neither shrink nor warp. We *guarantee* they won't.

\* \* \*

Why a Laminex door won't warp: This core of separate blocks with the grain frequently broken makes warping impossible. And on all sides "bulk-heads" of waterproof Laminex cement stop moisture, preventing shrinking or swelling



A boon to the contractor, Laminex doors are even more welcome to the owner. No more door troubles for him! Yet the extra cost of Laminex doors is practically nothing—perhaps three or four dollars more on a complete six-room job.

Send the coupon below for the name of a local Laminex dealer, and further information including catalog on the beautiful, new Philippine Laminex doors and carton trim. Tear off the coupon now.

CRISLER APTS., erected in California's capital by Geo. D. Hudnutt, Inc., who write, "Much difficulty is encountered here in fitting doors so that they fit from the hot midsummer to the damp midwinter—that is, we DID encounter this difficulty until we found Laminex doors. They 'stay put' with almost the constancy that might be expected of a metal door"

The Wheeler, Osgood Company,  
Dept. E-49, Tacoma, Washington.

Please tell me more about Laminex doors, and from whom they can be bought locally.

Name.....

Address.....

City.....State.....

## LAMINEX DOORS

*Will not shrink, swell, or warp*

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# Build Goodwill when you build a home...



Residence, St. Louis, Mo. Architect; E. E. Christopher;  
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You can give all your clients an extra measure of satisfaction with

## ARCH LATH

*made of*

# COP-R-LOY

Reg. U. S. Pat. Off.

### THE COPPER ALLOYED SHEET STEEL

This means an even better service from ARCH LATH—a durability far beyond all past records in plastering bases. It insures, too, that walls and ceilings shall be free from stain and give maximum protection against fire and cracking.

The distinctive arch design makes this lath extremely economical—both of material and labor. And ideal rigidity permits better, faster work. Arch Lath is universally adaptable

to any size home and gives successful results in any style of wall finish.

The fact that Arch Lath is now available in COP-R-LOY is arousing an ever-increasing demand—with good results in satisfied builders all over the country. Write for free sample for inspection.

WHEELING CORRUGATING COMPANY  
WHEELING, WEST VIRGINIA

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One Sheet of Arch Lath (28 x 96) grips the plaster at 8064 points; making the wall an integral unit of rigidity and strength, while minimizing possibility of cracking



Reg. U.S.

Pat. Off.

#### Wheeling Sheet Steel

The better and more durable steel, COP-R-LOY, is also available in building materials such as Spanish Metal Tile, Roofing Ternes, Diamond Lath, Corner Bead, Picture Mold, Base Screed, Wall Ties and other building essentials

Spanish  
Metal  
Tile





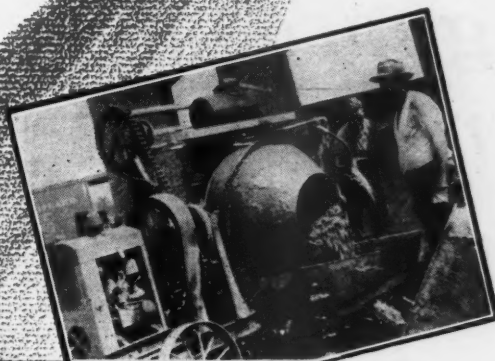
# 17 Wonders Units on This One Building Project

**D**AY and night nine Wonder Mixers and eight Wonder Pumps worked on this big job. They did their part in completing one of the world's largest Agricultural Machinery plants in record time. 55,000 barrels of cement mixed by Wonders on this job.

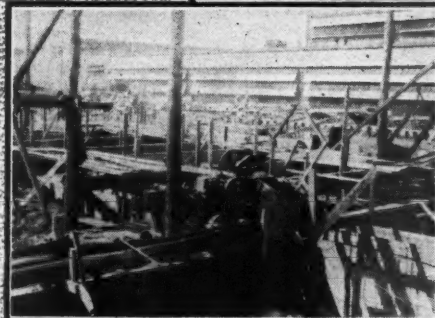
The Contractors on this project collected worth-while bonuses—the plant owners are cashing in on a huge increased demand for their products. Everybody is satisfied—happy—money ahead.

But this is nothing unusual—the wise contractor works wonders when there is a lot at stake.

Wonder Mixers are expected to produce more concrete—and they do. They are expected to stand up under continual operation—24 hours a day—and they do. Their record for years on large and small jobs—their ability to handle any mix—their advanced improvements, place Wonders many steps ahead of the Mixer field.



*A Wonder 7 with loader and Wonderquick water tank, one of five identical units on this large project.*



*A wonder Diaphragm Pump working 24 hours a day—one of eight on this job.*

*A Wonder 10 Mixer with loader, one of nine on this large project.*



**Mail This**

103

Construction Machinery Co., Waterloo, Iowa

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- (..) Wonder Diaphragm Pumps
- (..) C. M. C. Hoists
- (..) Mechanical Hoeman Plaster Mixers
- (..) Power Sawyers

Name \_\_\_\_\_

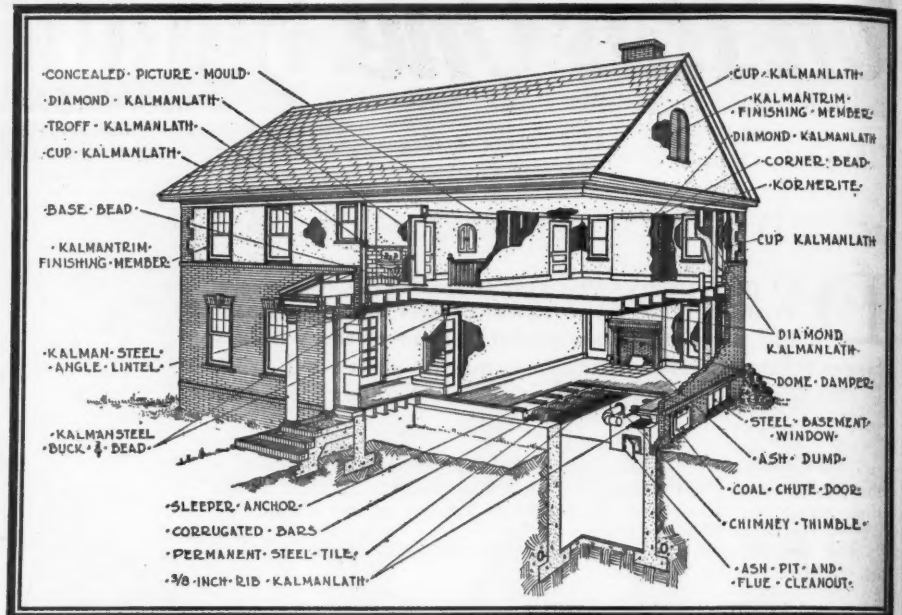
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**CONSTRUCTION MACHINERY CO.**  
103 Vinton St., WATERLOO, IOWA



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..... who  
guards his  
reputation



We believe every contractor is interested in approved fireproof building products—products that help to build and help to guard his reputation with the architect and building owner.

For this reason every Kalman product is designed from field experience—and every product is built on a quality basis to meet better the demands for more permanent construction.

And to enable the contractor to use the best, from cellar to attic, Kalman offers a wide line of improved, high quality fireproof building products.

In addition Kalman products offer distinctive advantages that mean faster erecting and direct savings in labor and materials.

Information on any one or all of the products listed below will be sent upon request. Write us.

## Kalman's Line of Products for Building

Package Receivers  
Dome Dampers  
Chimney Thimbles  
Coal Chute Doors  
Ash Dumps  
Ash Pit and Flue  
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Basement Windows  
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Beam Chairs  
Rib Chairs  
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Inserts  
Screed Chairs  
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## START NOW!

*Sell and Apply*

## MALLEABLE ASPHALT (MASTIC)

*Roofing and Flooring Composition*

Malleable Asphalt (Mastic) is an unusual Mastic Composition different from other similar products in ingredients, method of manufacture and in results.

Made in Beautiful Tile Red, Moss Green, as well as standard black, and in three consistencies: (Mastic) applied with Trowel; (Coating) applied with brush; (50-50 Mix) applied with either brush or trowel. Let us tell you more about this marvelous new material.

### *Salesmen Wanted*

You can make big money selling and assisting Dealers and Contractors to sell. We need men to act as District Sales Supervisors or local salesmen. Write at once for detailed information. Just say you are interested in our salesmen's proposition.

**MALLEABLE ASPHALT CO.**  
6355 Broadway CHICAGO, ILLINOIS

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Every old roof and cement floor in your town is a prospect. Cut out the "fly-by-night" roof paint salesmen, put their big profits in your own pocket by letting a crew of our reliable salesmen canvass and make sales for you. Your investment of less than \$100.00 turned over 50 to 100 times a year will earn 2000% to 5000% profit. Let us tell you about our unusual co-operative sales plan. We give exclusive sales Franchise, and are allotting valuable territories every day, so write at once.

### CONTRACTORS

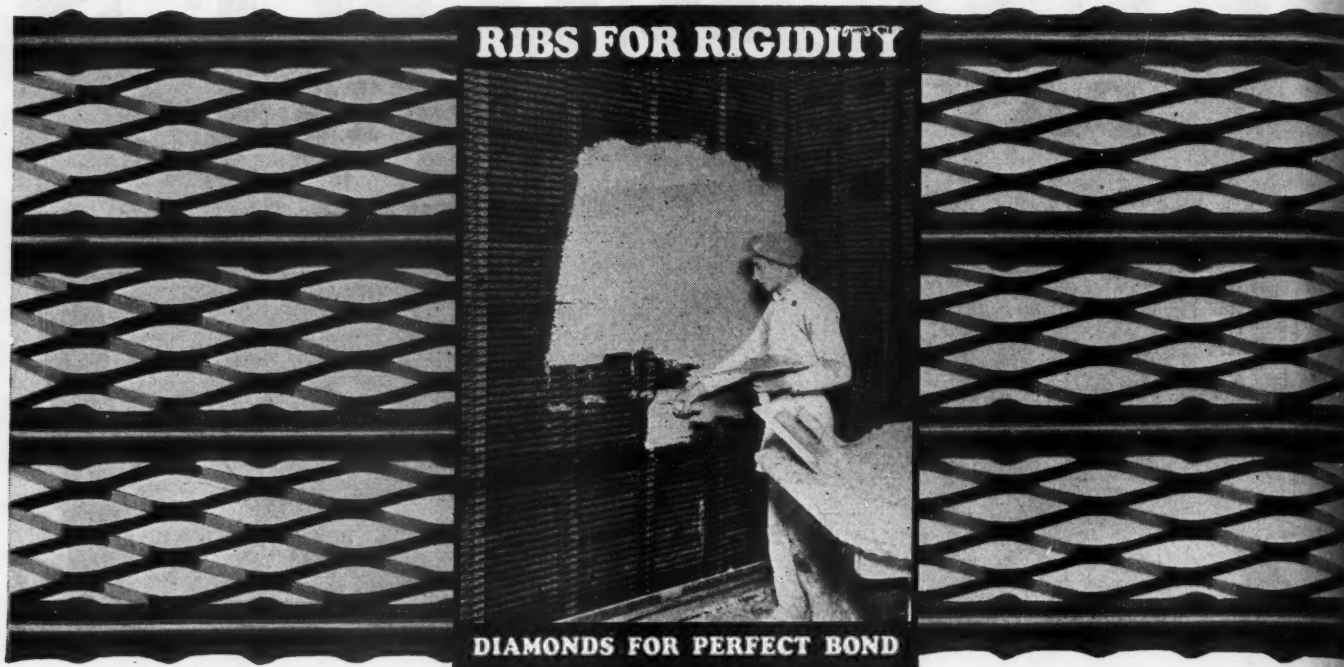
You can make a two-way profit—one on the sale and one on the application. Here is a wonderful opportunity for you to start a specialized business working in connection with your local dealer—or our salesmen will help you make sales and close deals. Let us tell you how we can help you make big money—write today.

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Please send me free samples and complete information.  
I am a Contractor ☐ Dealer ☐ Salesman ☐

NAME.....  
ADDRESS.....  
TOWN.....STATE.....



# Steelcrete Diamond Flat Rib Lath



## A Low Price Does Not Always Mean Low Cost

IT takes more than a low price on lath to produce a low cost plastered wall or ceiling. Cost of labor and material can make a low priced lath the most expensive on the market. Only the finished plastering cost can give you a definite idea of what the lath is costing you.

Steelcrete Diamond Flat Rib Lath is priced a trifle higher than ordinary lath but the extra that you pay is more than offset by lower erection, plastering and material costs.

By test, Steelcrete Diamond Flat Rib Lath costs less to plaster than any other lath on the market. The RIBS



*A Complete Line for Dealers*

prevent plaster waste, serving as a stop. The DIAMONDS insure perfect bond. The rigidity of the sheets of Lath not only speed up erection but assist rapid, efficient plastering. No other lath on the market gives you the exclusive advantages of two laths in one!

Whether you build on contract or build to sell, this distinctive Steelcrete Lath enables you to produce a better reinforced plastered wall or ceiling at lower cost. You can prove this on your next job. Send for samples, prices and descriptive literature and later insist on Steelcrete Products.

### THE CONSOLIDATED EXPANDED METAL COMPANIES

*Steelcrete Building, Wheeling, West Virginia*

Boston

Cleveland

Philadelphia

Pittsburgh

Chicago

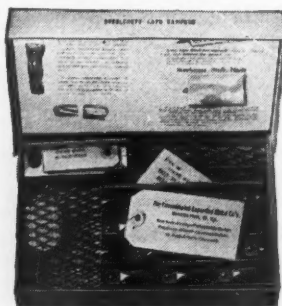
New York

Buffalo



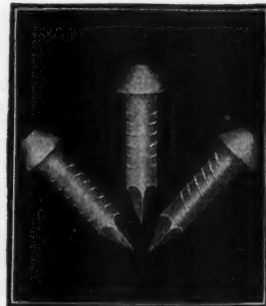
*Hank Tie Wires for Lathers*

An exclusive Steelcrete product. Uniform high quality. Wrapped in sanitary packages, approximately 25 lbs. each.



*Steelcrete Sample Offer*

Dealers eager to increase their business on Metal Lath and building specialties will want to inspect samples of the Steelcrete line. Write to us today for samples. There is no obligation. You will be the judge of the business and profit opportunity offered you by Steelcrete Products.



*Steelcrete Stub Nails*

Here is the Nail you can drive into Concrete without bending, breaking or blunting the point. Heavily zinc coated. Comes packed 1000 to the bag; also in 100 lb. kegs. The ideal nail for securing corner beads, metal lath and hangers.



# Here It is for \$169

NET CASH  
F.O.B. COLUMBUS



## JAEGER'S HANDY HALF-BAG TRAILER

(only \$179.50 with Rubber Tires)

Look the whole market over and you won't find another "buy" like this one — a 3½S all purpose mixer, all-steel with roller bearing wheels, Jaeger built and Jaeger serviced for a long and profitable life!

Has fast mixing "Flat-Spot" Drum with 5 second discharge, good for 35 cu. yds. a day. The power is a 2 h. p. F. & J. engine with Wico magneto—fully housed.

Nicely balanced. One man handles it, any car trails it. Choice of steel or rubber-tired disc wheels, all roller bearing.

It takes the biggest mixer company in the business to put out the "Handy" Trailer at this bed-rock price. Send for Jaeger price list and catalog, all sizes up to 28 ft. Save time and use the coupon, today!

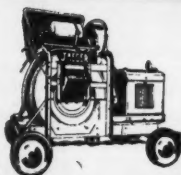


ANY CAR  
TRAILS IT



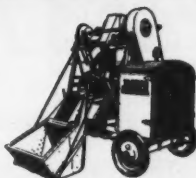
Husky  
2 h. p.  
Engine

# JAEGER



**NON-TILTERS**  
Up to 28 ft. Sizes

**TILTERS**  
with loaders, 3½, 5, 7,  
10, 14 ft.

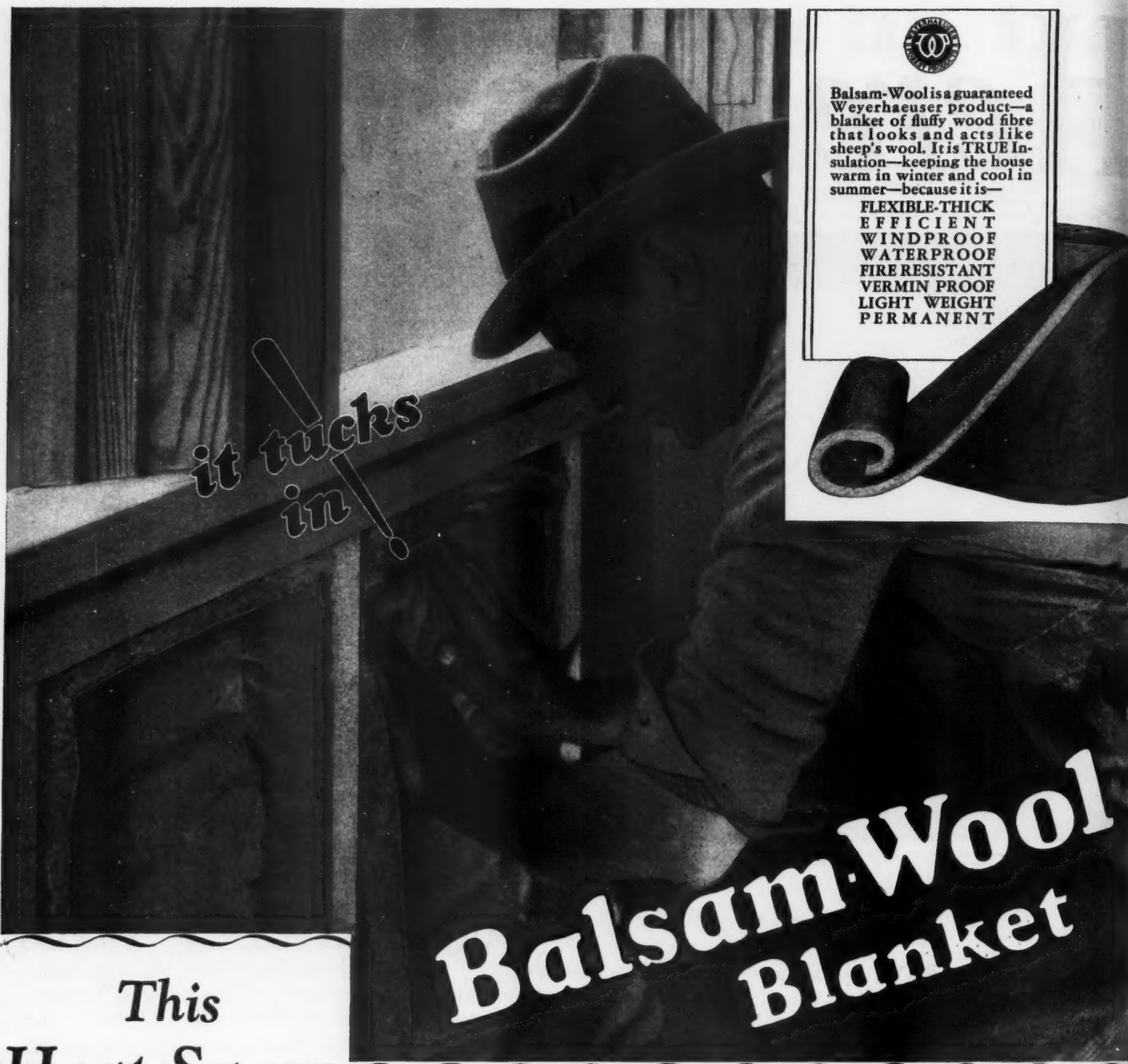


THE JAEGER MACHINE CO.,  
521 Dublin Avenue, COLUMBUS, OHIO  
Please send catalog, prices and terms on — ☐ Non-Tilt Mixers ☐ Plaster Mixer ☐ Tilting Mixers

Name \_\_\_\_\_ Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Date \_\_\_\_\_

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



*it tucks in*

**Balsam-Wool Blanket**

**This Heat Saver will help you sell the houses you build**

Consider heat saving when considering heat making. Select good heat-producing equipment for the houses you build, of course. Then make the heating jobs complete by installing Balsam-Wool blanketing in walls and roof to conserve heat. The Balsam-Wool certificate is then your proof of a heat-tight house—evidence that will help you sell.

Balsam-Wool is true insulation. It is flexible and fits snugly between the framing in walls and roof. It tucks into every nook and cranny. It seals every crack and crevice. It caulks every window and door frame. It does what no rigid insulation can do.

And in your planning you can keep this fact before you—the saving of at least 25% in radiation is sufficient to pay all or at least a large part of the cost of the full inch Balsam-Wool blanketing.

The cost is absorbed. Maximum comfort is provided. And you can assure your customer savings of from 25% to 40% in annual fuel bills.

Before you select heating equipment, investigate Balsam-Wool and the advantages of certified insulation in making sales—making satisfied customers who will recommend you to others.

Ask your lumber dealer. If he is unable to supply you now, write for names of dealers who can furnish Balsam-Wool.

**WOOD CONVERSION COMPANY**  
CLOQUET, MINNESOTA

*Makers of Balsam-Wool, the Flexible Insulating Blanket. Also Makers of Nu-Wood—the All Wood Insulating Wall Board and Lath*

*Sales Offices: New York, 101 Park Ave.—Detroit, 515 Stephenson Bldg.—Chicago, 360 N. Michigan Ave.—Minneapolis, Baker Bldg.—Kansas City, 231 W. 47th St.—Seattle, 6659 White Bldg.*

SOLD THROUGH RETAIL LUMBER DEALERS

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# Chicago's Largest Apartment Building



Andrew J. Thomas, Architect; Graham, Probst & White, Associate Architects; O. W. Rosenthal-Cornell Co., Builders

## 4387 windows

in the

### Marshall Field Apartments hung with ACCO No. 8 Sash Chain

*Durability—long life—economy of installation—freedom from maintenance expense.* These are the advantages of Acco No. 8 Sash Chain which prompted its specification for this important building project.

Acco No. 8 copper-bearing steel Sash Chain will outwear any other window suspension . . . Acco No. 8 Sash Chain will not rot . . . will not stretch or shrink . . . will not fray or tear.

Carpenters can work faster with Acco No. 8 Sash Chain because there are no knots to tie—and because Acco No. 8 Sash Chain feeds over the pulley into the casing of its own weight, no carpenter's "mouse" is needed.

### ACCO No. 8 Sash Chain

*operates perfectly over any cord pulley*

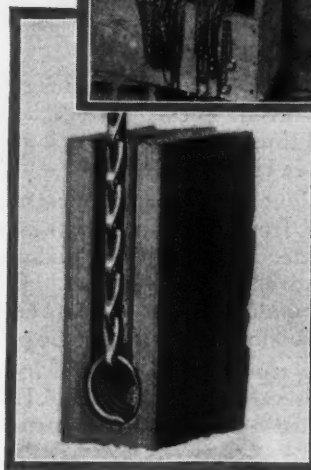
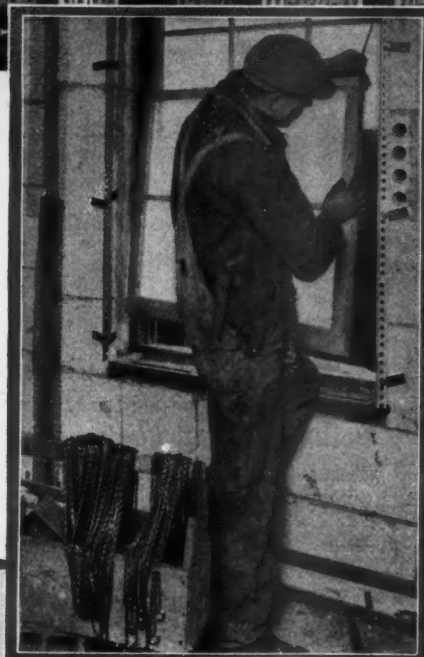
It is not necessary to specify special pulleys for use with Acco No. 8 Sash Chain. The chain is made to operate with mechanical perfection over regular semi-circular grooved pulleys. Write for prices and other particulars.

**AMERICAN CHAIN COMPANY, Inc.**  
BRIDGEPORT, CONNECTICUT

In Canada: Dominion Chain Company, Limited, Niagara Falls, Ontario  
District Sales Offices:

Boston Chicago New York Philadelphia Pittsburgh San Francisco

# ACCO No. 8 SASH CHAIN



**25% material  
saving with  
ACCO No. 8  
Sash Chain**

Tying knots wastes from 4 to 5 feet of cord per window. 100 feet of Acco No. 8 Sash Chain will hang 2 more windows.

A coil spring is slipped into the end of the chain and inserted into the bore of the sash. (For two hole sash the coil is inserted into the upper bore.)

The weight is fastened with a strong hook, as shown in the illustration at the right.

Both ends of the chain are thus anchored securely and permanently, with no possibility of the connections coming loose or breaking.





WHEN YOU BUILD OR REMODEL, INSULATE YOUR HOUSE WITH

# INSULITE

*the Wood-Fiber Insulating Board*

## THE NATION'S PROTECTION AGAINST HEAT *and* COLD

**F**OR eighteen years INSULITE has stood for good insulation in homes and buildings of all kinds. Its all-wood sturdiness and heat resisting qualities have performed unceasingly a comfort-giving, money-saving service for people in mansions and cottages, in commercial structures of every variety.

Winter cold loses its terrors. Summer heat is no source of dread. Locked against the elements is the house thus protected—and a sure means of economy in reducing fuel bills.

Humidity is no cause of annoyance; sounds that once echoed from room to room are softened; health is better protected; the building itself is greatly improved, because INSULITE is a *double purpose* building board—structural strength and high insulating value in the one product.

Builders—send for samples and information regarding the various uses of INSULITE in new and remodeled homes and other structures.

ALL WOOD

$\frac{1}{2}$  INCH THICK  
**RESISTS**  
HEAT, COLD  
*and* NOISE

INSULITE is all wood—plus the fabricating process which increases many times the natural insulating quality of wood fibers. Wood thus fabricated not only possesses great ability to resist heat, cold and noise, but has unusual strength and will withstand the action of time over long periods.

THE INSULITE CO., 1202 BUILDER'S EXCHANGE, DEPT. 8, MINNEAPOLIS, MINN.

*A Backus-Brooks Industry*

il, 1929

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1929

# SKILSAW



TRY A SKILSAW ON YOUR JOB—FREE  
JUST FILL OUT THIS CARD AND MAIL IT TODAY  
WE PAY THE POSTAGE—NO ENVELOPE OR STAMP NECESSARY

SEE OTHER SIDE  
REGARDING  
GUARANTEE →

FIRST CLASS  
PERMIT No. 1644  
(Sec. 384½ P. L. & R.)  
CHICAGO, ILL.

## BUSINESS REPLY CARD

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2c.-POSTAGE WILL BE PAID BY-2c.

**SKILSAW**INC.

3310 ELSTON AVENUE

CHICAGO, ILL.





# SELECT



## TIME-TESTED

SKILSAW, Inc., is the originator of portable electric hand saws, and is the only manufacturer of portable electric hand saws that has a successful five year record of service to the building trade.

## PRACTICAL

Naturally you want electric hand saws which have the practical features for your work, not those machines designed with "selling points." Why not buy the most powerful, fastest cutting, safest, and the most durable tool—SKILSAW combines these practical features and yet is light and compact. You will want the base to be vertically adjustable and also to quickly tilt for bevel cuts.

## RELIABLE

You will be better satisfied when you know that a substantial company is back of that product and guarantees it.

## QUICKLY SERVICED

You will want an electric hand saw with a reputation for nation wide service. There are SKILSAW service stations in all principal cities.

## GUARANTEED

SKILSAW, Inc., definitely guarantees each model of SKILSAW to be:

- 1—The Safest Electric Hand Saw.
- 2—The Fastest Cutting Electric Hand Saw—Dollar for Dollar.
- 3—The Most Powerful Electric Hand Saw—Dollar for Dollar.
- 4—The Lightest Electric Hand Saw Per Depth of Cut.

## PRICED RIGHT

Standardization of product and mass production because of world-wide demand have made possible prices which are positively amazing!

## RECOGNIZED

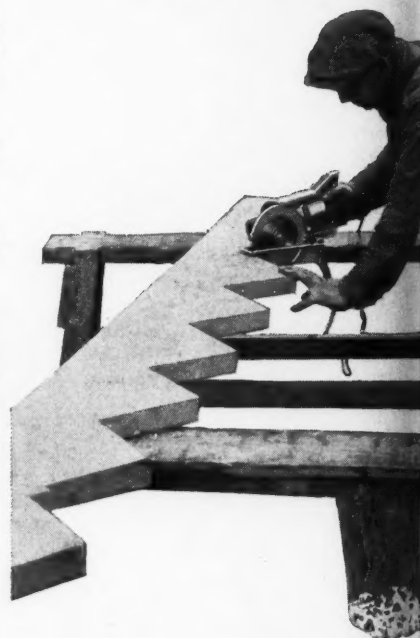
Successful carpenter builders, contractors by the thousands recognize these facts, that's why SKILSAW, the saw you see on most jobs, has nation wide preference.

## TRY IT

Just one demonstration of SKILSAW will prove its superiority to other electric hand saws. Put it on your job. See it work!—"Get the feel of it." Use it to rip, cross-cut, groove, mitre and bevel. Just try it on rafters, joists, sheathing, floors, bridging, lintels, stair stringers, doors, and interior trim. See it cut or score limestone, marble, cement, tile, in fact, any material. There are 4 important sizes from which to choose. You will be convinced that there is only one saw that meets all your requirements—all the tests of a real tool. Demand that it bear the trade name

# SKILSAW

REG. U. S. PAT. OFFICE



SIMPLY SIGN THIS CARD AND DROP IT IN THE MAIL BOX—We pay Uncle Sam

CHECK HERE

☐ I want a demonstration of SKILSAW on my job at \_\_\_\_\_

CHECK HERE

☐ Send me one of your latest catalogues showing new and improved SKILSAWS. This is for our file We have no work for SKILSAW now but may be interested at a later date.

MY NAME IS \_\_\_\_\_

OCCUPATION \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

*It is understood that I am under no obligation whatever*



The NEW WAY to cut and score STONE right on the job. Don't waste another minute, another dollar picking away with a hammer and chisel. SKILSAW does it faster, neater, more economically.

EVER  
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Colo  
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score  
luste  
turn  
com

FOR T

With standards of beauty and durability to please home owners—*Eternits will help you sell your house*



EVERYONE has long conceded the fire-proof qualities, the durability, and the economy of asbestos shingles. But not every builder was convinced that asbestos shingles were beautiful—and accordingly, could add to the sale value of his house . . . until now—for Eternits have done away with any objection by perfecting an amazingly beautiful roofing!

Eternit colors are soft and lustrous—and they stay that way. Emerald Green, Indian Red, Quarry Blue, Colonial Gray—every one is absolutely fade-proof, guaranteed not to bloom or fade out. Sun cannot scorch them; rain will not dull their luster. And the other colors—Autumn Bronze and Heatherblends (a combination of five special shades)

actually increase in beauty as the years pass. . . Eternit beauty means money for you!

And Eternits have contributed more than beautiful colors to make asbestos roofs profitable for builders. Eternits are hard, tough, durable—made of a mixture of asbestos fiber and Portland cement. They will not rot. They won't crack. Or split. Or raise. They are easy to apply. There is an exclusive Eternit design—the Horizontal. And Eternits are economical—for an Eternit roof is the only covering any home will ever need.

It is beauty in roofing that will sell home owners and architects. And Eternits, of all asbestos shingles, are beautiful. Write today for information, roofing directions and samples.

Eternit, Inc., Riverview Drive, St. Louis. Offices and warehouses at Philadelphia, New Orleans, Houston and Jacksonville. Also makers of Eternit Big-Seven Corrugated Asbestos Sheets and Eternit Asbestos Flat Sheets.

ETERNIT, INC., Dept. C  
9215 Riverview Drive, St. Louis

Please send me full details, roofing directions and samples.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

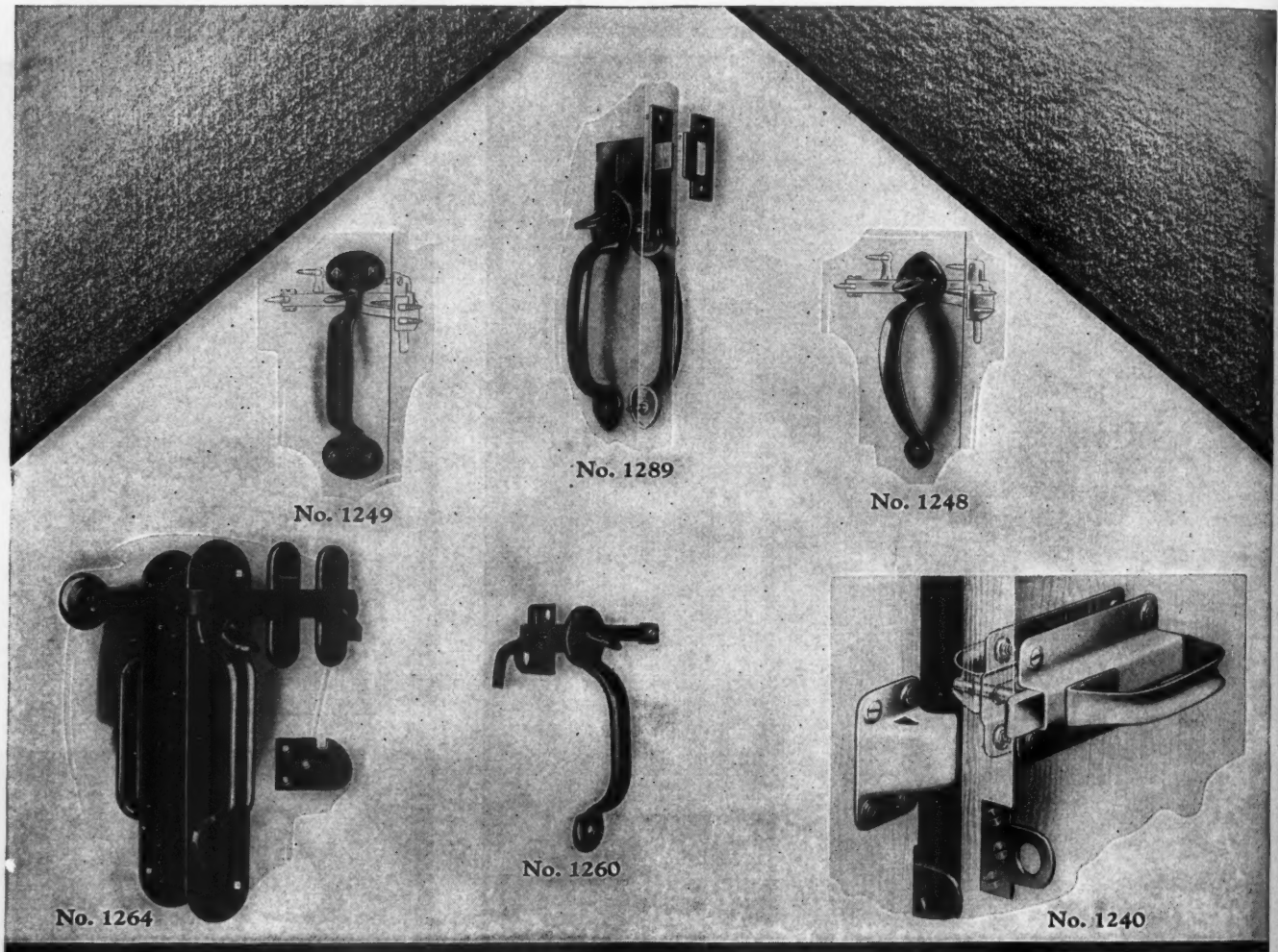
Dealer's Name \_\_\_\_\_

FOR THE PROTECTION OF THE BUILDER, EVERY ETERNIT SHINGLE IS TRADE-MARKED; EVERY ETERNIT ROOF IS REGISTERED

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# STANLEY LATCHES



For large doors, small doors, thick doors or thin doors, there is a Stanley Latch that just fits.

Stanley Latches have a sturdiness, a comfortable grip and a security that appeals to everyone. They are shaped to fit the hand, be it large or

small. Their smooth finish eliminates the danger of scratching the hand that grips them.

Stanley Catalog No. 41e illustrates and describes the full line of popular designs. Send for a copy. The Stanley Works, New Britain, Conn.

## STANLEY HARDWARE

MADE OF STANLEY STEEL

STANLEY

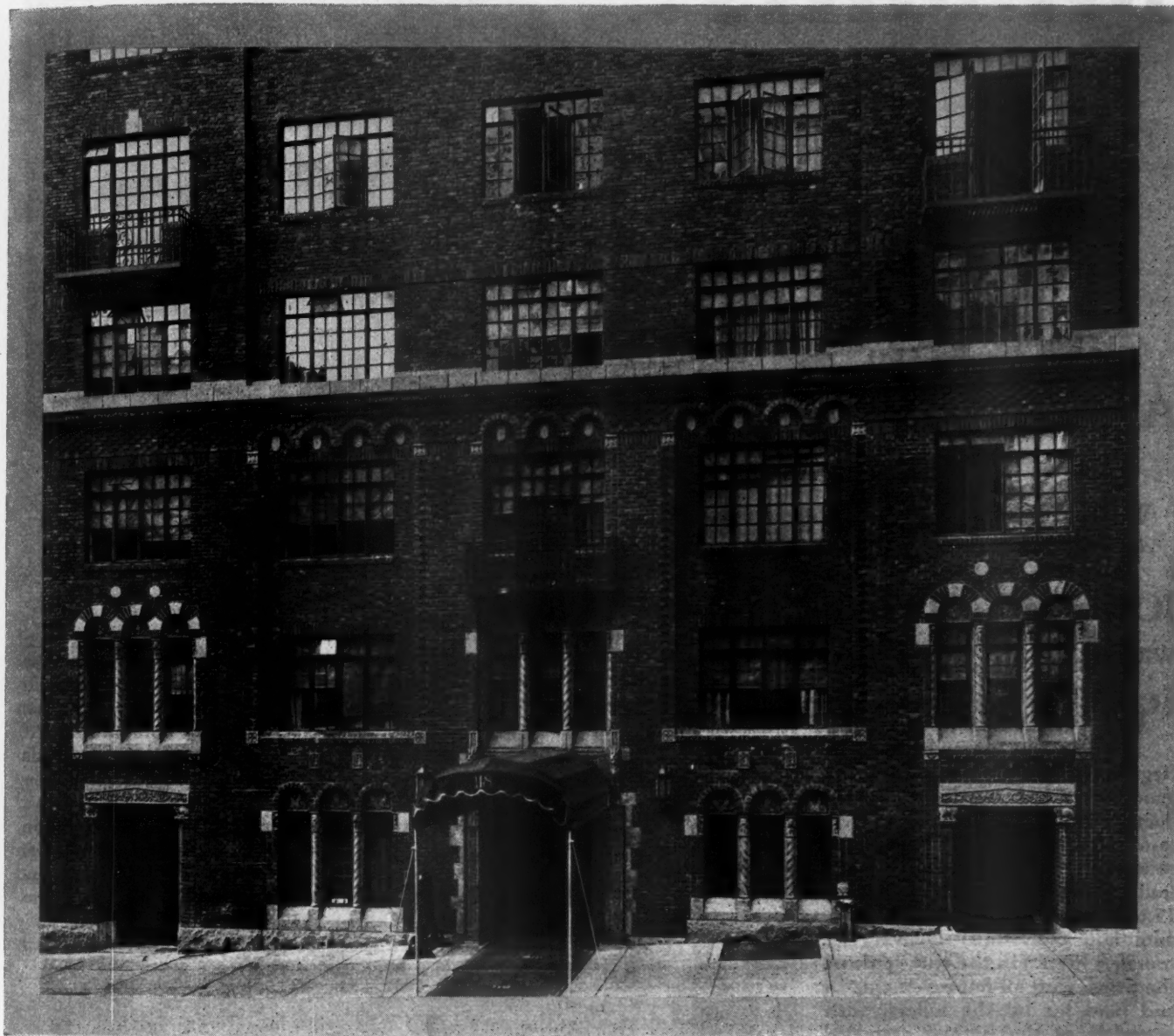


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# LUPTON STEEL WINDOWS

## *STABILIZE YOUR BUILDING INVESTMENT*



*Lupton Residence Casements of steel are used in the Calumet Apartment House, New York City  
George F. Pelham, architect. Louis Cowan, contractor and owner*

MORE and more, buildings are being designed as permanent investments. Lupton Steel Windows are a development of this modern trend.

These modern windows help your building to maintain its up-to-date characteristics through the years. In design, they represent the most advanced thought in window engineering. Architecturally correct, they are practical as well as ornamental. They operate easily and efficiently. They serve in all weathers, will not warp, stick or chatter, and save weather stripping.

Standardized sizes permit economies in manufacture

which bring their cost within line with even the smaller building operations. They are being used, today, in thousands of investment buildings, hotels, apartment houses, offices and other commercial buildings. They have come to be accepted by consumers as synonymous with the finest in fabricated steel.

Let us show you how Lupton Steel Windows help insure investment value. Write for free literature. Mention the type of building you plan to erect, and we will send you the particular catalog desired. DAVID LUPTON'S SONS Co., 2203 E. Allegheny Avenue, Philadelphia, Pa.

# LUPTON

WHERE STEEL IS FUSED WITH SINCERITY



# "How do you do it, Mr. Mills?"

1337 bungalows built in 22 months. A unit of 350 now under construction for delivery during the first six months of 1929. In 28 months a 245 acre prairie has been transformed into a city of 10,000 population, complete with all underground work, alleys, streets, landscaping, ornamental street lighting system, etc.

## A 25 MILLION DOLLAR CITY

WESTWOOD—Elmwood Park—Illinois  
An outstanding home development project of Mills & Sons



Reading left to right, Jack Mills, Jr., John Mills, Sr. (President), and L. H. Mills

JOHN MILLS, President, tells how it was done—

"OUR success in closing out our developments so rapidly is due to (1) Our 42 years experience has taught us the building business. (2) Acreage in large tracts purchased at low prices years in advance of general trend of population. (3) Quantity production linked with buying power. (4) "Built-to-last-forever" construction—brick, steel and concrete. (5) Lieutenants supervising various trades of construction in our employ steadily from 15 to 35 years, giving us maximum service with minimum cost. (6) Delivery of complete homes in the true sense of the word, with all improvements in and paid for by the sellers, with materials of the highest standard known to the building trades. (7) We



**SCHLAGE**  
**Button LOCKS**  
AB-4  
Made by SCHLAGE LOCK CO., San Francisco, Cal. Branches in principal cities



are our own contractors in all major items of construction used in our building developments, which means that a strict supervision is maintained by the three firm members, rather than awarding contracts to various companies. (8) 80% of our homes sold through recommendations of former purchasers. (9) Terms: Easy as rent. (10) SCHLAGE Button LOCKS used throughout. Their smooth lock spring action, appearance, convenience, and ease of installation are unquestionably strong selling points, and places them at the top of the list of "Fine Hardware". Out of 1337 bungalows in which they have been used, we have not found one which has not been 100% perfect."

*John Mills, Jr.*  
PRESIDENT

P.S. "As further evidence of our faith in your product, enclosed find copy of hardware contract on our present unit of 350 buildings now under construction, which list you will note specifies SCHLAGE Button LOCKS."

Chicago, Illinois,  
February 6, 1929

**The MODERN Lock for MODERN Buildings**

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



# Four-ton Jennie *bucks a LOXIN!*



**P**OWERS Elephants are known to every circus fan and here is a real photograph of the largest one bucking a Loxin. . . . And LOXIN holds! Power—husky power—is packed in this Sebeco product which the brute tug of elephants can't budge.

You can quickly judge how sure you are on jobs where you use LOXIN. This good leader of the 5-Point Star products is in mighty demand by men who know their tools and do work that stays put.

The 5-point Star leaders are: SPRINGIN—the toggle with resilient wings; SCRUIIN—the lead anchor that never fails; DRYVIN—the expansion shield you hammer home; TAMPIN—the machine screw anchor set in place with tamping tool; and LOXIN—the all-steel, hot-galvanized machine bolt shield that locks in place.

You'll never git a "white elephant" in Sebeco products—there isn't one in a million that doesn't do its job, Y' know I've sent out thousands of samples; I'll send you one if you'll just ask me.

*Ole Ben Bolt*

## STAR EXPANSION BOLT COMPANY

143 Cedar Street . . . . . New York

*A full stock is carried at these branches*

NEW YORK	PHILADELPHIA	BOSTON	ATLANTA
DETROIT	SAN FRANCISCO	SEATTLE	LOS ANGELES
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For Free Samples and Stuffers, mail this coupon

STAR EXPANSION BOLT CO.

143 Cedar Street, New York

Send me free the items checked.

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	<input type="checkbox"/> Samples		<input type="checkbox"/> Samples
SCRUIIN	<input type="checkbox"/> Stuffers	TAMPIN	<input type="checkbox"/> Stuffers
	<input type="checkbox"/> Samples		<input type="checkbox"/> Samples
[Be sure to state quantities desired]		LOXIN	<input type="checkbox"/> Stuffers
			<input type="checkbox"/> Samples

Name.....

Address.....

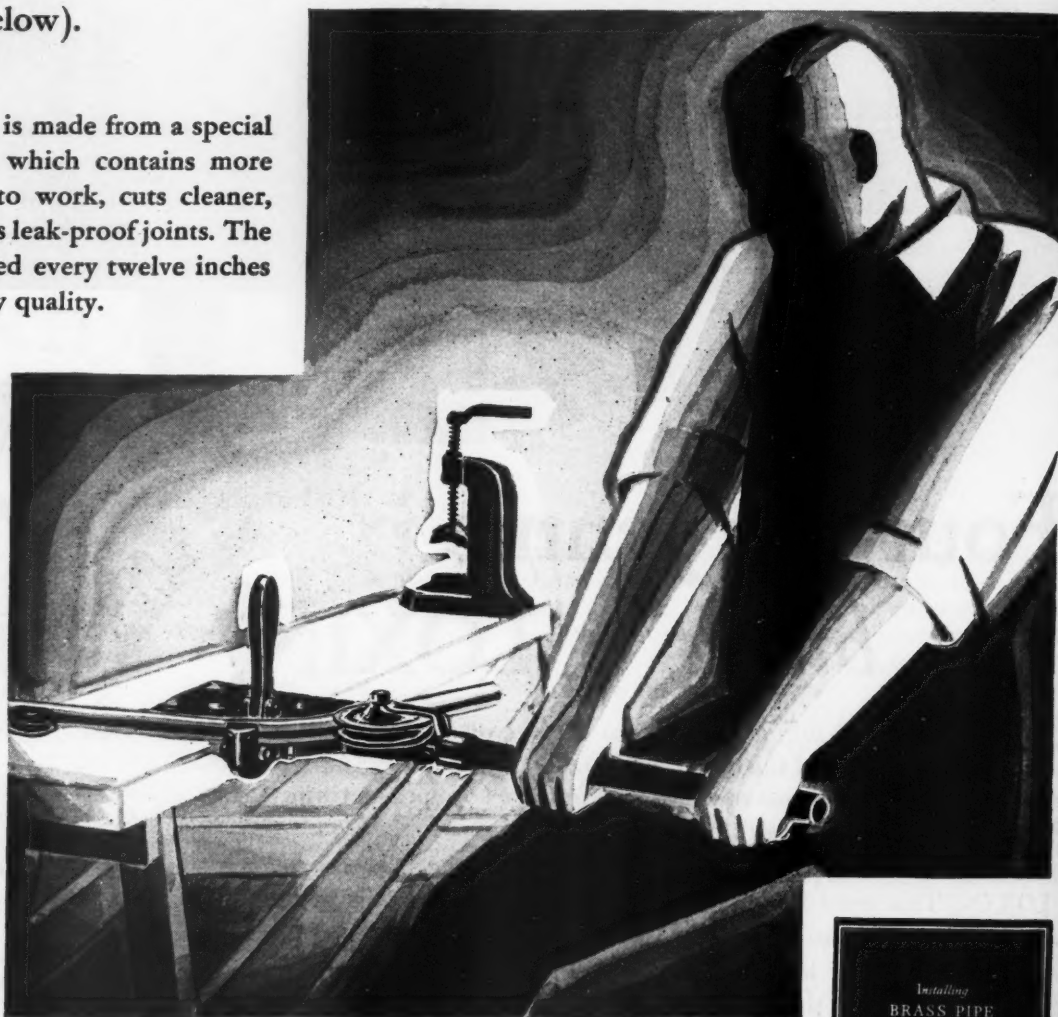
City..... State.....



# Alpha Brass Pipe—properly installed— lasts indefinitely

Good Brass Pipe \* is immune to rust—but it's not immune to faulty installation. Brass Pipe is easier to work than iron and steel . . . but in many respects it requires different tools and different methods to get the best results. These methods are fully explained in our new book, "Installing Brass Pipe." (See our book below).

\*Alpha Brass Pipe is made from a special kind of Chase Brass which contains more copper. It is easier to work, cuts cleaner, sharper threads, makes leak-proof joints. The name "Alpha" stamped every twelve inches guarantees satisfactory quality.

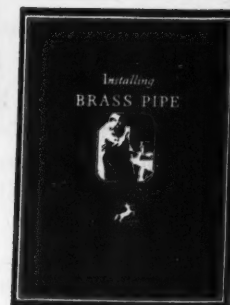


*Chase Brass & Copper Co., Incorporated, at Waterbury, Connecticut. And to assure speedy deliveries, Warehouse stocks in New York, Boston, Newark, Philadelphia, Baltimore, Cincinnati, Cleveland, Detroit, Chicago, St. Louis, New Orleans, Los Angeles, San Francisco.*



## ALPHA BRASS PIPE

*Also Chase bronze screen cloth and Chase copper roof gutters and downspouts*



SEND FOR  
THIS FREE BOOK

*This book explains the best methods of installing brass pipe. Send for it—we believe you will find it interesting and helpful.*

**Make sure! Genuine PEARL has  
2 Copper Wires in the Selvage**



## Profit with "Pearl" NOW!

*Every Unscreened Porch—Every Rusted Porch and Every New Home is an opportunity for you to Make Money Screening Porches*

**N**OW IS THE TIME to show your prospects how simply and economically Porch Screens can be installed. Send for our plan showing portable screen panel construction. It will aid you in securing more business.

Clean, Sanitary, Easy on the Eyes, firmly woven so as to make no-bag, no sag screens, requiring no painting, PEARL is the most economical, as well as the most handsome, screen wire cloth on the market today. *Outwears Galvanized Wire Cloth several times.*

Home owners prefer PEARL wire cloth because of its beauty and durability. PEARL is highly rust-resisting—made so by a process *exclusive with us.* No competitor can use this process, consequently no imitation of PEARL can be "just as good."

*To assist you in pointing out to your prospect the simplicity of construction and installation of screened porches, we have prepared a Blue Print of a Porch Plan which we will send free.*

We have a dealer in your town. See him or write us if you are interested in permanently screening doors, windows or porches. Samples and literature **FREE.**

Address Dept. "A"

**The Gilbert & Bennett Mfg. Co.**

New York    Georgetown, Conn.    Chicago    Kansas City

PEARL is made in Regular Grade (12 x 13 Mesh) and 14, 16, 18, 20, 24 and 30 Mesh, also Extra Heavy Grade (14 Mesh only)  
The best hardware dealer in your city sells "PEARL"

MAIL THIS COUPON

The Gilbert & Bennett Mfg. Co.  
Dept. "A"—Box 760  
CHICAGO, ILL.

Gentlemen:

Please send complete information on PEARL WIRE CLOTH and PLAN for screening porches to

NAME.....  
STREET.....  
CITY.....STATE.....





Make Your Bid Safe and  
Increase Your Profits with

# TRUSCON

## STEEL BUILDING PRODUCTS

You save time and labor on the job by installing Truscon Steel Building Products. Your building is completed sooner, you can estimate more accurately and you secure all your products from one dependable source. All these factors mean more profits and more satisfaction to you.

At the same time, you are doing a job that you know will stand up, that will greatly please the owner and that will build up your reputation for quality work. Truscon backs up its products with expert engineering and estimating service and with timely deliveries from stock warehouses for commodity products located throughout the country.

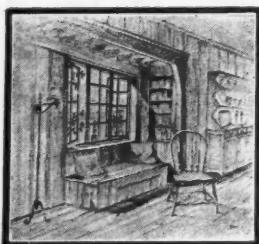
Let us help you make your bid safe!

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

*Engineering and Sales Offices  
in all Principal Cities*  
Factories in Youngstown, Cleveland,  
Detroit, Los Angeles and Japan.

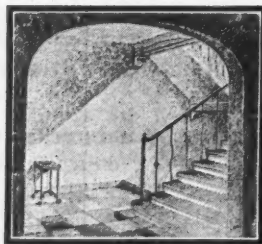


The Truscon Laboratories, Detroit, Foreign  
Trade Div., 90 West St., New York;  
The Trussed Concrete Steel Company of  
Canada, Ltd., Walkerville, Ont.



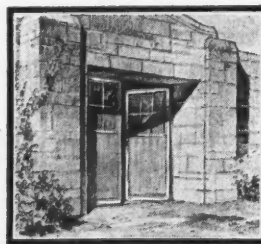
**STEEL CASEMENTS**

Attractive, practical and economical. Modern design. Good workmanship. Furnished in single or combination units.



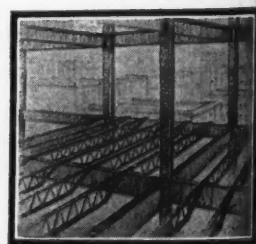
**METAL LATH**

Truscon 1-A and 2-A Laths won't bulge or sag, and positively clinch the plaster. Truscon furnishes Hy-Ribs, Diamond Lath, Cornerite, Corner Beads, and Accessories.



**STEEL DOORS**

For basements, furnace rooms, service entrances, garages and industrial buildings. Stock sizes furnished in swing and slide types, single or double units.



**STEEL JOISTS**

Economical construction for fireproof floors. Self-supporting, requiring no centering. Furnished in Open Truss and Plate Girder Types.

ALL FROM ONE SOURCE OF SUPPLY

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



## Get on Money-Making Street with Duntile-*NOW*

**B**ECAUSE it builds better buildings for less, Duntile is literally sweeping the country. Every day, new records are made. Permanent, masonry construction at cost of frame makes its own appeal. Builders appreciate it and respond to it in such volume that in 1928 Duntile plants consumed 785,992 barrels of cement—a 30% increase over 1927.

### Records Everywhere

Duntile advantages are making remarkable accomplishments possible for Duntile manufacturers everywhere. The color effects appealed to a Pennsylvania oil company. They have done \$90,000 worth of business with a local Duntile plant. The largest ramp garage in Canada and an enormous baseball stadium demanded super strength. Duntile was selected. Real estate men in St. Louis investigated Duntile savings. As a result, 125,000 Duntile went into one sub-division, 70,000 in another and 40,000 into a group of industrial buildings—and Mr. Frauenfelder, holder of the St. Louis Duntile franchise, had a 1928 business of over \$100,000. One manufacturer reports his Duntile displaced a half-million dollars worth of other construction last year. Another sends in photographs of whole blocks of homes in which Duntile was used. One plant reports its original investment multiplied thirty-three times.

### Everywhere—



### Plants like this



### Men like these

are accomplishing lifetime ambitions for manufacturing independence through the exclusive Duntile franchise. Guarded against competition, starting with modest capital, equipped with automatic machinery, backed by national advertising, with a product far in the lead in beauty, quality and economy, Duntile manufacturers are realizing opportunities beyond parallel in the manufacturing field.

### A Proven Industry

By actual tests of time and use, Duntile proves itself the greatest development of today in building materials. And the prosperity and progress of Duntile plants shows Duntile manufacturing is a business opportunity without equal for the man with limited capital but broad ambitions.

The whole story of Duntile opportunity today is told in plain words and clear figures in our book, "Basic Facts." You owe it to yourself to at least be familiar with what Duntile offers you. Use coupon below. Now.

### W. E. DUNN MFG. CO.

415 West 23rd Street

HOLLAND, MICHIGAN

### This Book Tells How—

W. E. DUNN MFG. CO.  
415 West 23rd Street Holland, Michigan

4-29

☐ Show me through your book, "Basic Facts," how I can win manufacturing independence by supplying Duntile in my community. Show me how I can manufacture Duntile in a plant of my own at a profit of 30 to 60 per cent.

☐ Show me how I can build permanent masonry walls at the cost of frame and make more money for myself.

NAME.....

ADDRESS.....







# O RIGINALITY

When a customer wants originality in his roof, remember this picture of the filling station of Milani Bros. at Mt. Prospect, Illinois, which is roofed with Winthrop Tapered Asphalt Shingles.

With the many ways in which you can lay Winthrops with their twenty colors—solid or blended—you can put on thousands of individual and original roofs.

Here the Greenfield Blend was used by the architects, Zook & McCaughey. Some of the shingles are cut in odd sizes. Occasionally a few are bunched up—thus emphasizing the effect naturally created by the thick butts of Winthrops.

Permanency is here along with originality. The thick butts of Winthrops double the thickness of the exposed portions. The colors of Winthrops are



non-fading because Winthrops are surfaced with crushed slate of natural and not artificial colors.

Winthrops do not curl. They can not rot, rust, split or crack. They bear the Class C Label of Underwriters' Laboratories.

### *Samples Free*

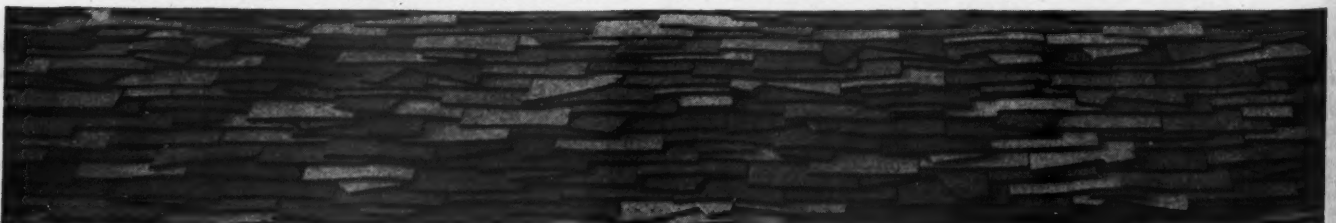
Most good lumber dealers carry Winthrops, but we believe you can use one or more full size samples. Write us, stating, please, what color you wish or whether you'd prefer that we send you one of our popular blends. Mention, too, please, if you could use a sample of Argotex Building Felt, noted for its insulating value.

**BECKMAN-DAWSON ROOFING COMPANY**

1032 Brooks Building, 223 W. Jackson Boulevard, Chicago, Illinois  
Factories at Chicago, Detroit and Lockport, N. Y.

 **Winthrop**  
**Tapered Asphalt Shingles**

*Argotile (slate surfaced) Roofing, Supreme (mica surfaced) Roofing, Wearproof (talc surfaced) Roofing, Argotex Insulation*





## Above All — BEAUTIFUL

—the first requisite of the purpose they must serve. Yet combined with beauty are practical, time-tested Kawneer principles of construction that offer ease of installation and protection to the plate glass. The demand for Kawneer construction has grown steadily year after year, proving that here is a growing field of contracting that offers a big opportunity for specialization.

### MAKE A NAME FOR YOURSELF AS A STORE FRONT SPECIALIST

You'll find plenty of merchants in your city ready to welcome your advice. You'll find many ready and willing now to improve the efficiency of their window display facilities. Mail the coupon below for more information about this big opportunity.

# Kawneer

BRONZE  
STORE FRONTS

MAIL THIS  
COUPON.

THE KAWNEER COMPANY  
1926 FRONT ST., NILES, MICHIGAN  
Send more information about the  
opportunity of store front special-  
ization. I'm interested.

Name.....

Address.....

City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



**BUILDINGS  
ARE BUILT**

**REPUTATIONS  
ARE BUILT**

**PROFITS  
ARE BUILT**

## **WITH STRUCTURAL CLAY TILE**

**E**XCELLENT construction adds to the reputation of the builder. Reputation brings business. But profits can result only when reputation-making construction is secured with economy.

For permanent buildings of all kinds, Structural Clay Tile offers convenience and flexibility—qualities essential to economical construction.

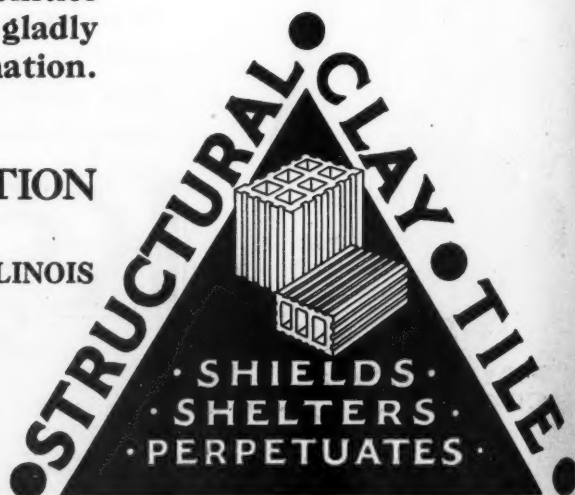
It will pay you to take advantage of the full possibilities of Structural Clay Tile. This Association will gladly answer specific questions or send general information. Its service is given without charge.

### **STRUCTURAL CLAY TILE ASSOCIATION**

*Formerly Hollow Building Tile Association*

**1406 ENGINEERING BUILDING**

**CHICAGO, ILLINOIS**



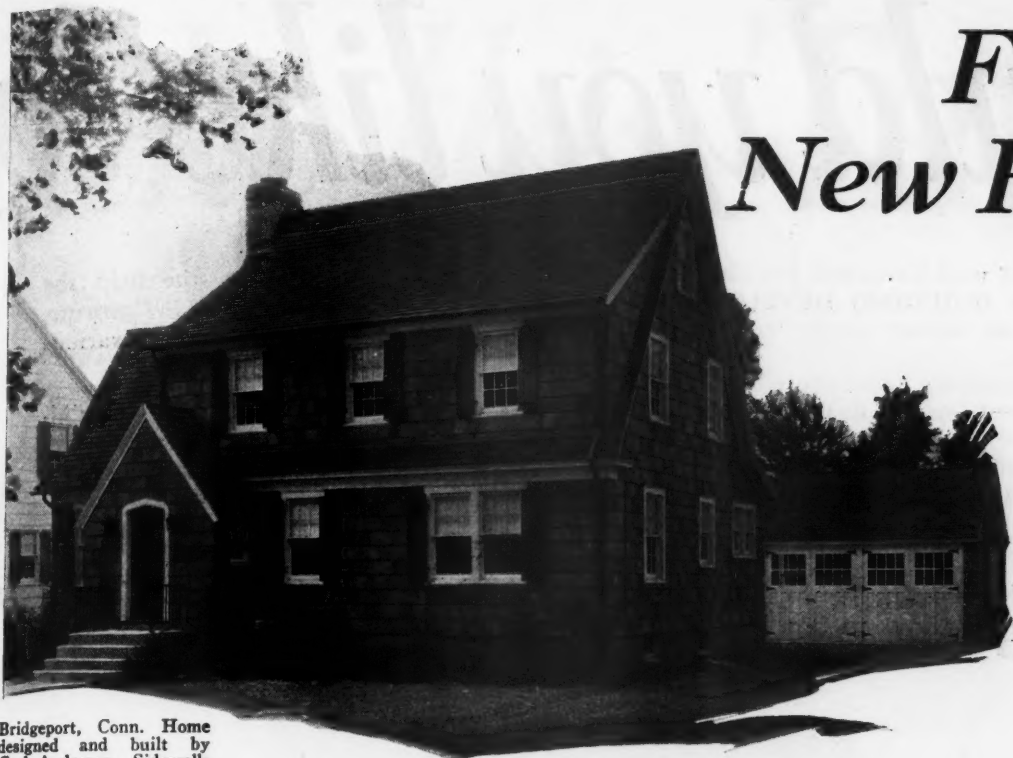
Bridgeport  
designed  
Carl Anderson  
of Weather  
shades of  
exposure  
Variegated

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Old  
Home

WEATHER  
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## For New Homes

Bridgeport, Conn. Home designed and built by Carl Anderson. Sidewalls of WEATHERBEST in three shades of Gray with wide exposure; Roof of 18-in. Variegated Green.

## Give Your Clients New Values in Lasting Colors

### For Modernizing

WEATHERBEST Stained Shingles for sidewalls and roofs assure better color values because of the special WEATHERBEST process of staining 100% edge grain red cedar. Thorough laboratory tests prove the value of the pigments and oils . . . time and exposure tests prove durability and lasting colors . . . there is seventeen years' experience behind the WEATHERBEST policy "NOT TO CHEAPEN MATERIALS OR PROCESS TO MEET PRICE COMPETITION."

WEATHERBEST advertisements in national magazines in full color are reproduced from actual finished homes and show true values. Let us send you Portfolio of color Photogravures to show your clients.

### Try Our Free Sketch Service for Modernizing Work

Secure a picture of a home growing old from the owner or kodak it yourself. Attach this to a WEATHERBEST Modernizing Service Blank properly filled out and send it to our Modernizing Service Dept. Take the sketch which we will send you free and use it as the basis of your sales talk. There is big money in modernizing work that can be done in your community. The WEATHERBEST \$3,000 Prize Contest for 1929 should interest you and your clients. WEATHERBEST STAINED SHINGLE Co., Inc., 149 Main St., North Tonawanda, N. Y. Western Plant—St. Paul, Minn. Distributing Warehouses in Leading Centers.



Old  
Home



New Home

WEATHERBEST Service Sketch made from picture above showed how the new home would look when finished. Let us make a sketch from snapshot of an old house for you.

**Weatherbest**  
**STAINED SHINGLES**  
FOR ROOFS AND SIDE-WALLS

WEATHERBEST STAINED SHINGLE Co., Inc.,  
149 Main St., North Tonawanda, N. Y.

- ☐ Send WEATHERBEST Modernizing Service Dept. blanks and full details and suggestions for developing a modernizing business.
- ☐ Send Sample Color Pad and Literature for new work.
- ☐ Send enrollment blanks and details of \$3,000 1929 Modernizing Contest.

Name .....  
Address .....



# Would you like to

**T**HROUGH its well illustrated and clearly edited pages **BUILDING DEVELOPER** yearly takes its readers on an "extended tour" of the country.

Important developments everywhere are described thoroughly—from the financing to the sale of the homes.

All steps, Engineering, Landscaping, selecting Materials and Plans, Building, Advertising Methods and Sales Methods are taken up in detail.

Being in close contact with the field the Editors are able to present the latest in Construction Methods—new ideas developed in various sections.

Experts on all the numerous speculative building and development problems are interviewed. The reports appear in the publication in readily understandable articles.

**Where Can You Find This Information Except in  
BUILDING DEVELOPER?**



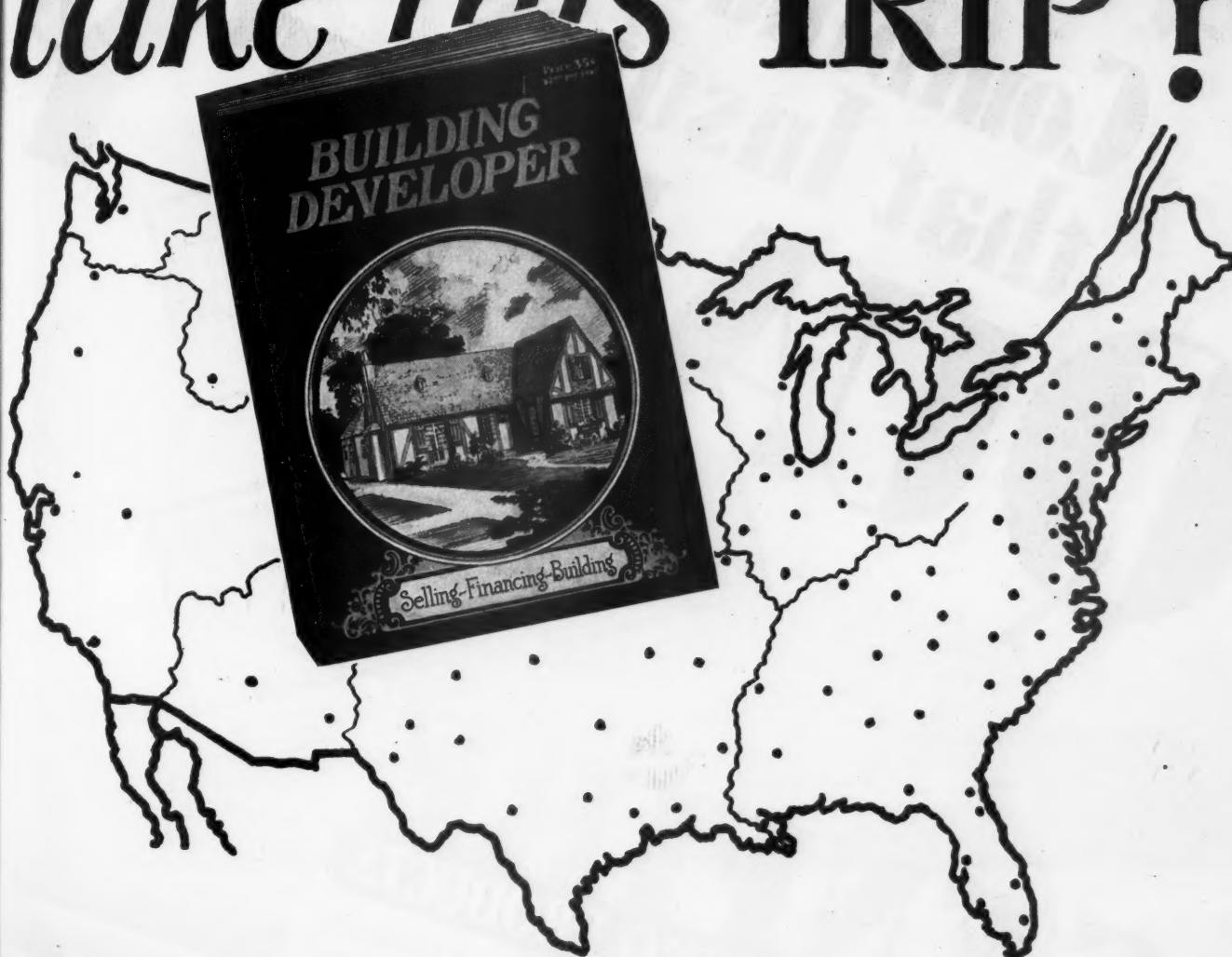
**Why Did This Crowd Come?**

Scenes like this are found all over the country—crowds of hundreds and even thousands of home hunters assemble to see the opening of a developer's Model Home.

**How They Draw the Crowds Is Told  
in Every Issue of Building Developer**

**Building Developer 120 West 42nd St., New York, N. Y.**

# Do take this TRIP?



In just one year the Editors of BUILDING DEVELOPER covered important developments in all the above cities.

Enjoy this year's trip. See the successful projects, learn what "put them over"—ideas worth hundreds of dollars to every Building Contractor interested in Speculative Building whether he builds for re-sale one or a thousand homes a year.

BUILDING DEVELOPER tells What to Build and How to Sell, so forming a valuable supplement to the AMERICAN BUILDER, which tells How to Build.

**Send the Coupon—"Hop On and Ride!"**

BUILDING DEVELOPER  
120 West 42nd Street, New York

DATE.....

I am doing Speculative Building, so send me BUILDING DEVELOPER for One Year for \$2.—enclosed (3 years for \$5. If you wish.)

Name.....

Address.....

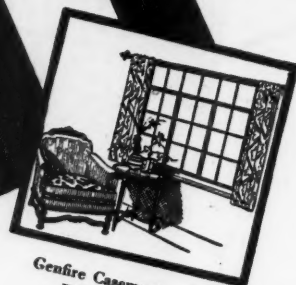
City.....State.....

*Fill out if you please*

IN 1928 I BUILT  
FOR RE-SALE.....HOMES  
IN 1929 I EXPECT TO  
BUILD FOR SALE.....HOMES



# A Combination that Insures QUALITY



Genfire Casements—the most modern of windows.



Genfire Metal Lath—assures permanent beauty of plaster effects.



Genfire Steel Joists—the modern, firesafe floor construction.

## GENFIRE FIRESAFE BUILDING PRODUCTS

Builders find many advantages in standardizing upon Genfire's complete line of nationally known Steel Building Products. Genfire quality allows them to turn out better jobs without cost penalty for their customers—and consequently enables them to make better satisfied customers. Genfire's manufacturing facilities, dealer stocks and national warehouse system offer complete assurance that builders' needs will always be supplied fully and on time. Write for literature on any or all of these products.

### A Complete Line of Steel Building Products

Standard Steel Casements  
Pivoted Steel Windows  
Projected Steel Windows  
Double-Hung Steel Windows  
Donovan Windows  
Basement Windows  
Pressed Steel Lintels  
Steel Doors and Frames

Trussit  
Steel Tile  
Welded Steel Fabric  
T-Bar Steel Joists  
Plate Girder Steel Joists  
Corner Bead  
Self-Sentering  
Expanded Metal  
Interior Metal Trim

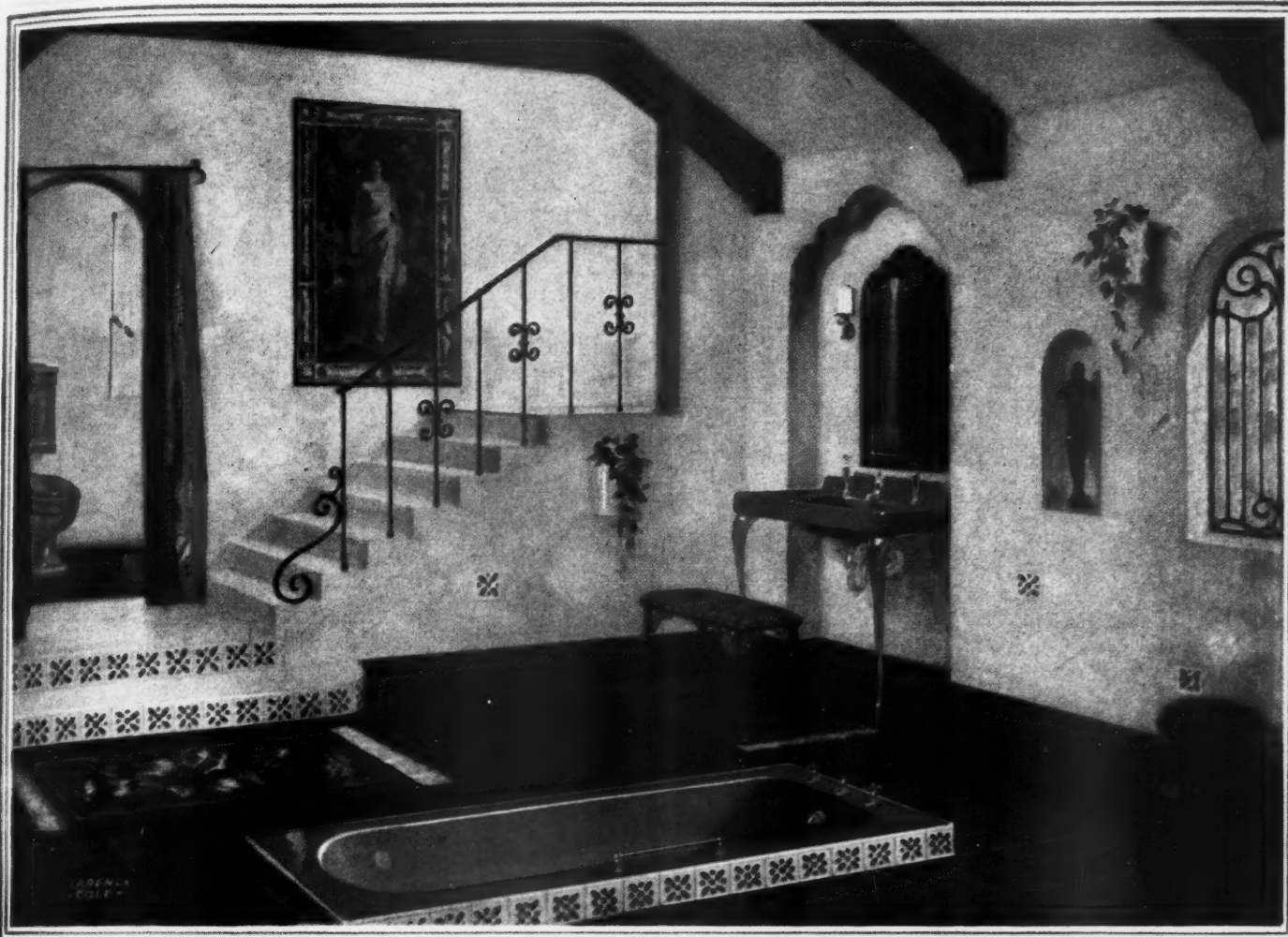
Herringbone Lath  
Key Expanded Lath  
Diamond Rib Lath  
Genfire Sheet Lath  
Duplex Steel Bridging  
Armco Ingot Iron Lath  
Cold-Rolled Channels  
Waterproofing  
Compounds

**Genfire Steel Company - Youngstown, Ohio**  
Warehouses and Offices in all Principal Cities. Dealers Everywhere.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

A reproduction from the Book

# "Color and Style in Bathroom Furnishing and Decoration"



Why does the bathroom exert a decisive influence in the buying of a home? Simply because the buyer has no voice in the decoration of the room or the

selection of the plumbing fixtures. There they are, built-in. And there they must stay. You are responsible for their design and color and background. If they are not all that the buyer expects and wants you will very likely find it more difficult to close the sale—you may even lose it. So it is only good business for you, and every builder, to keep well posted on the trend in bathroom furnishing and decoration.

What does the home-buyer look for in bathroom furnishing and decoration, in this day of color and improved design? The answer to that question is so important that you should write at once for a copy of the new book "Color and Style in Bathroom Furnishing and Decoration."

This book is the first authoritative statement of the new and advanced ideas in bathroom architecture, equipment and decoration. It illustrates the latest plumbing fixture designs in the newest and most beautiful colors—

## "Standard" PLUMBING FIXTURES

Ming Green, St. Porchaire Brown, Royal Copenhagen Blue, Rose du Barry, Meissen White, Ionian Black, Clair de Lune Blue, Ivoire de Medici,

T'ang Red, and Orchid of Vincennes. Complete plumbing installations in these new colors are pictured in bathrooms that are advanced in design, in decoration, and in color harmony.

Words are not used to describe colors in this book. In every case the actual colors for the plumbing fixtures, the walls, ceiling, floor covering, floor, furniture and draperies are shown. Two complete color schemes are illustrated for each bathroom design. These color schemes were originated by eminent artists and interior decorators, recognized authorities in the use of color. Consequently the book will be an invaluable guide to you in the use of color in the bathroom—whether you build \$8,500 or \$85,000 homes to sell. A copy of "Color and Style in Bathroom Furnishing and Decoration" will be mailed to you on request, and because the edition is limited it is suggested that you write at once, using your business letterhead.

**Standard Sanitary Mfg. Co. PITTSBURGH**



# MORTON

## MEDICINE CABINETS

### For Every Style Bathroom



"Out of the carton into the wall." Installed in a few minutes. No upkeep. Made to last as long as the building.

The "Venetian," "Vanity Venetian" and "Georgian" Models, illustrated above, are especially recommended to those who wish to add a touch of unusual distinction to the bathroom. They have all-mirror doors, artistically etched, which completely conceal the cabinet. Many exclusive features of construction.

THE Morton Line of Steel Bathroom Cabinets is *complete!* Regardless of the type of bathroom, be it in a modest residence or a pretentious mansion, a hotel, apartment or club, there is a Morton Cabinet to satisfy every requirement.

There are 11 models from which the architect, builder, realtor and owner may choose the exact cabinet to fit any decorative scheme. Made to recess or hang on wall. Ideal for new or old bathrooms. All cabinets made of steel, electrically welded, finished in white enamel permanently baked on. Special color finishes at nominal extra charge. Send for 24-page illustrated catalog, which includes installation details.

**MORTON MANUFACTURING COMPANY**

5190 WEST LAKE STREET-CHICAGO, ILL. U.S.A.

Morton Medicine Cabinets are nationally advertised in

Saturday Evening Post  
Literary Digest  
American Magazine  
Good Housekeeping  
House and Garden

MORTON MANUFACTURING CO., 5190 West Lake St., Chicago, Ill.



Without obligation, please send me a catalog of the MORTON Line of Steel Bathroom Cabinets.

Name \_\_\_\_\_

Address \_\_\_\_\_

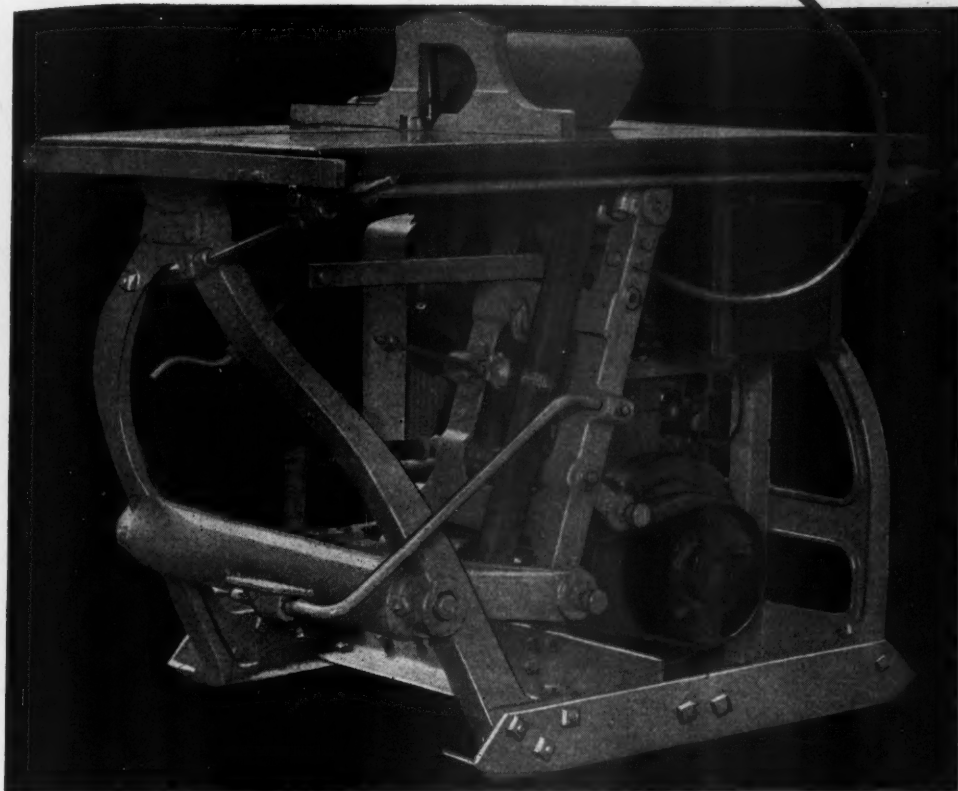
City \_\_\_\_\_ State \_\_\_\_\_

Please check business or profession:

Architect \_\_\_\_\_ Builder \_\_\_\_\_ Contractor \_\_\_\_\_ Realtor \_\_\_\_\_ Home Builder \_\_\_\_\_

Just finished  
Name  
Address  
City  
Type of  
Send to  
721 Pa

# This is the Saw You've Waited for



In 2 Sizes: No. 3 and No. 5  
 Tilting Table  
 Straight-Line Cut-Off  
 Cut-Under Frame  
 Radiator-Cooled Engine  
 Engine Under Table  
 Efficient Saw-Guards  
 Hand or Foot Operation  
 Easily Adjustable Gauges  
 Adjustable Arbor Shaft  
 Self-Oiling Arbor Bearings

## It makes Hand Labor Expensive on Practically any Cutting

Either of the two new Rex Portable Saws make cutting so easy, fast, and cheap that hand labor is out.

For these Rex Saws handle cuts ordinary rigs can't manage: dadoing, mitering, and double-mitering. And the exclusive Straight-Line Cut-Off cuts larger pieces of lumber, ranging up to 5" x 10", 4" x 12", and 2" x 14"—and handles all cuts far faster.

Check these and other important details with the Rex Saw Catalog—if you are interested in getting faster, cheaper lumber cutting than ordinary rigs or hand labor can give you.

Coupon brings the book.

The Rex Saw is made in two sizes — No. 3 and No. 5 — the former for lighter work such as home building — the latter for heavy work where large cuts are common — both Saws with either gas or electric power. No. 3 is only 28" wide for easy passage through any standard door.

Just fill in and send this coupon if you're interested in cutting costs on any job—

Name.....

Address.....

City..... State.....

Type of work.....

Send to Chain Belt Company  
 721 Park Street, Milwaukee, Wisconsin

CHAIN BELT COMPANY  
 721 Park Street, Milwaukee, Wisc.

# REX SAW RIGS

(Reg. U. S. Pat. Office)



# In BOSTON



The Motor Mart Garage contains 30,000 cubic feet of Solvay-cured artificial stone which was furnished by the Cambridge Artificial Stone Co. Architect, Ralph H. Doane. Builders, Chase and Gilbert.

**T**HE following letter to the Solvay Sales Corporation tells what the use of Solvay Calcium Chloride accomplished for the contractors on this job.

"We take this opportune moment to let you know the very satisfactory results obtained in connection with the stone work for the Motor Mart Garage, Boston, by using Calcium Chloride in our mix.

This building includes approximately thirty thousand cubic feet of stone. We started this job in July and it was completed in November. The entire job was completed by the general contractor approximately two months ahead of schedule and our ability to give them the stone as quickly as we did assisted them in doing this."

Yours very truly,

CAMBRIDGE CEMENT STONE COMPANY

(Signed) E. A. Bosso

Write today for information regarding the use of Solvay Calcium Chloride in Concrete Construction. Ask for booklet 1753



**SOLVAY SALES CORPORATION**

Alkalies and Chemical Products Manufactured by  
The Solvay Process Company

40 Rector Street, New York



# SOLVAY

## Calcium Chloride

Flake 77%—80%

Manufactured under United States Patents No. 1,527,121 and No. 1,592,971

**THE IDEAL CONCRETE CURING AGENT AND ACCELERATOR**

# AROUND *the* FAMILY TABLE



## *Good Information—Easily Found*

**T**HE Green Paper Directory is one of the outstanding and unique features of the AMERICAN BUILDER'S Annual Issues.

It is of great value to the buyers of the industry because it gathers together into one list all of the important names and addresses. It classifies all of the products of the AMERICAN BUILDER advertisers, grouping each item under its proper heading. Then the headings are cross-indexed so that you can easily find the group you are interested in.

Printing this directory on the distinctive green paper makes it easy to locate.

This April Directory is the only classified directory of the year in the AMERICAN BUILDER. When we do a job we believe in doing it well and thoroughly. A complete directory, including all information and worked out with cross references is more useful, it seems to us, presented once a year than to try to give a small partial directory monthly.

A directory, to be valuable, should be as complete as possible. Our April Green Paper Classified Directory and Buyers' Guide covers every product made and sold by the firms advertising in this issue.

And besides the Directory Section there is also the INDEX OF TRADE NAMES. These trade names are arranged alphabetically, each being followed by the name and address of the manufacturer.

Often specifications call for items by trade name without giving the manufacturer's name also. Some of these trade names are not so well known and con-

tractors are at a loss to know just where to get the necessary information. Reference to our Index of Trade Names in this April issue will usually put you on the right track.

These unusual directory features, together with the large amount of valuable editorial matter and popular building designs presented in this issue, will cause this book to be kept close at hand—on the desk, drafting board, or in the sales room—where it can be easily referred to and used all through the year.

The advertising announcements in this issue are of particular interest. New ideas, new models, and new services are being brought out all the time by the progressive manufacturers serving the Building Industry. Many of these new things are being announced for the first time in this April Reference Number. New uses and new values for old-time standard materials are also made plain in the advertising.

The wise builder keeps in touch with all of these developments. Write to our advertisers and look into these matters. You will find them eager to serve you.

A few extra copies of this big Reference and Directory Number are available if any of your friends would like to subscribe. For a limited period we will be able to start new subscriptions with this April issue. The friendly assistance of our present subscribers in calling this issue to the attention of their friends will be appreciated.

EDITOR, AMERICAN BUILDER.

### Our Front Cover

**F**OLLOWING the style of our Annual Reference Numbers for five years past, Our Front Cover this year is in four colors and gold, and presents an allegorical or imaginative scene—the Fairy Godmother of Construction opening this Directory and Reference Issue to the professional men and leaders of the Building Industry, for their study and use. Each trade and profession is represented in the throng of elves shown in the painting as crowding forward to heed her call and examine the book.

In these pages we have endeavored to gather information useful to all, and we offer it now for your approval.



# when it RAINS and RAINS and RAINS



*This house is just as easy to show  
and sell as in fair weather*

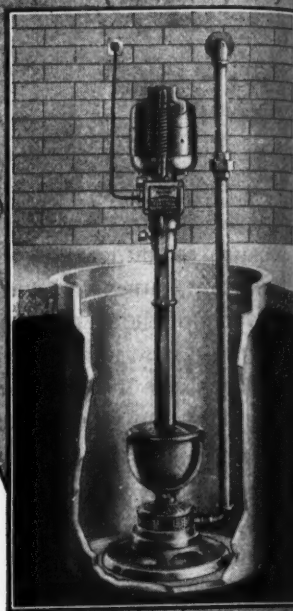
THE buyer of this home will never be troubled with a wet basement, no matter how hard or how long it rains . . . because it is equipped with a Penberthy Pump which handles all basement seepage and drainage quickly and quietly.

A Penberthy Pump will reduce your selling effort on the homes you build where basements are below sewer level or sewerage facilities are not available.  
Your plumbing contractor can quickly supply and install either the electric or water operated Penberthy Pump.

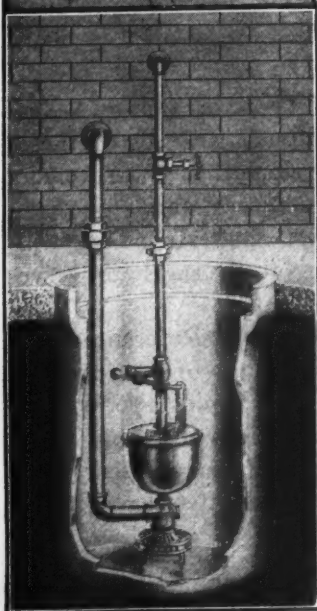
**PENBERTHY INJECTOR COMPANY**  
DETROIT  
Established in 1886  
Canadian Plant  
Windsor, Ont.

## PENBERTHY PUMPS

PREVENT FLOODED BASEMENTS



Penberthy Automatic Electric Sump Pump



Penberthy Automatic Collar Drainer (Water Operated)

APR 13 1929



BERNARD L. JOHNSON, *Editor*

105 West Adams St., Chicago—30 Church St., New York City

## February Construction Totals

**F**EBRUARY construction contracts awarded in the 37 states east of the Rocky Mountains show a decline from January and from the preceding February, according to F. W. Dodge Corporation. Last month's total, \$361,273,900 in amount, was 12 per cent less than the January, 1929, record and it was 22 per cent below the total for February of last year. The decreases mentioned above may be partly attributed to the fact that last month had four business days less than the preceding month and one business day less than the corresponding month of a year ago.

Two districts made new high totals for the month of February, the new records being reached by New England and Texas. Two other districts, the Middle Atlantic States and the Pittsburgh District, reached totals which were next to the highest ever recorded for February.

The February building and engineering total included the following items of importance: \$129,486,400, or 36 per cent of all construction, for residential buildings; \$68,265,500, or 19 per cent, for commercial buildings; \$57,593,000, or 16 per cent, for public works and utilities; and \$56,092,100, or 16 per cent, for industrial projects.

Last month's contract total brought the amount of new construction started in the 37 Eastern States since the first of this year up to \$771,241,800, as compared with \$892,500,000 for new construction started during the first two months of last year, the decrease being 14 per cent.

New contemplated projects reported during February reached a total of \$772,621,600. This figure was six per cent less than the amount reported during January of this year and it was 18 per cent below the amount reported during February of last year.



## To Vouch for Ladder Safety

**T**HE Ladder Manufacturers' Association of America has indicated its obligation to the purchasers of the products made by its members by formulating a code for the construction of safe ladders. It is reported that many months of actual investigation and testing preceded the final adoption of this code, which sets out in unmistakable terms the materials, dimensions and construction details of ladders which may be considered safe from the construction standpoint.

Individual ladder manufacturers are being licensed to use the "Safe Ladder" label for the purpose of indicating ladders which conform to this safety code. The label contains a picture of a ladder being tested under a heavy weight on which is lettered the words, "A Safe Ladder." This illustration is the trademark by which safe ladders may be known. In conjunction with it appear the words, "Manufactured under inspection of and approved by the Ladder Manufacturers' Association of America."

Each manufacturer licensed places on his own safe lad-

ders a label license number which makes it possible for inspectors of the association to select ladders directly out of stock and submit them to association tests. Any manufacturer who may be found placing the safe ladder label on ladders which do not conform to association standards will have his license revoked.



## Building Surveys Being Made

**T**HE National Association of Real Estate Boards regards city surveys by local boards as an invaluable aid in preventing an overbuilt market and showing the local building needs. The association regards the survey as the only method yet devised to provide a true inventory of the market. Carrying out the survey plan the association has fostered, the Cincinnati, Ohio, board has recently undertaken such a survey. It is the third member board of the association to undertake such a survey since the first of the year.

The Dallas, Texas, board has just completed its fourth semi-annual survey. This survey was made by 71 realtors and covered wholesale and retail districts, single homes of all values and apartments and duplexes. The Des Moines, Iowa, board has completed its 1929 survey and tabulated the results so that the situation in the city for this year may be accurately compared with 1927 and 1928 when similar surveys were made.



## Codes Cover Welded Construction

**T**HIRTY-EIGHT municipalities in the Pacific Coast and Southern states have building codes covering the electric welding of buildings. These cities are now operating under the regulations laid down by the Uniform Building Code by which it is now legal for the commissioner of buildings in each place to grant, in the same manner as for riveted frames, permits for the erection of electrically welded steel building frames also. The section authorizing the use of welding sets forth the essential elements needed by engineers and architects in working out the designs for welded joints in steel beams and columns used in building construction.

The Pacific Coast Building Conference is an organization whose members are the building inspectors and commissioners of buildings, banded together to secure the adoption of a uniform building code. As a result, engineers and architects who design buildings, and contractors who build them, may have but one type of code to conform to instead of a different code in each place.

In addition to the 38 cities mentioned, there are many cities in which the code is either now being adopted or the ordinances of adoption are being prepared. In the eastern section of the country various organizations have been at work for some time on a building code incorporating a section covering welding.

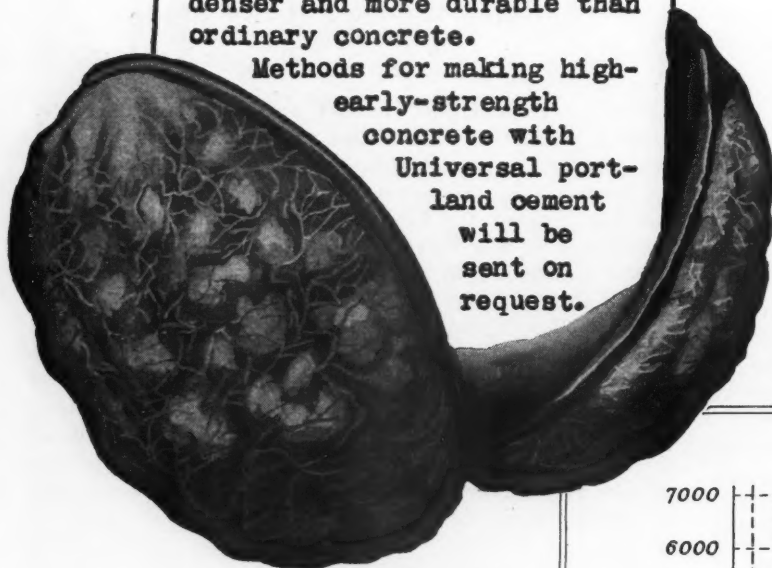


# The Whole Story in a Nutshell

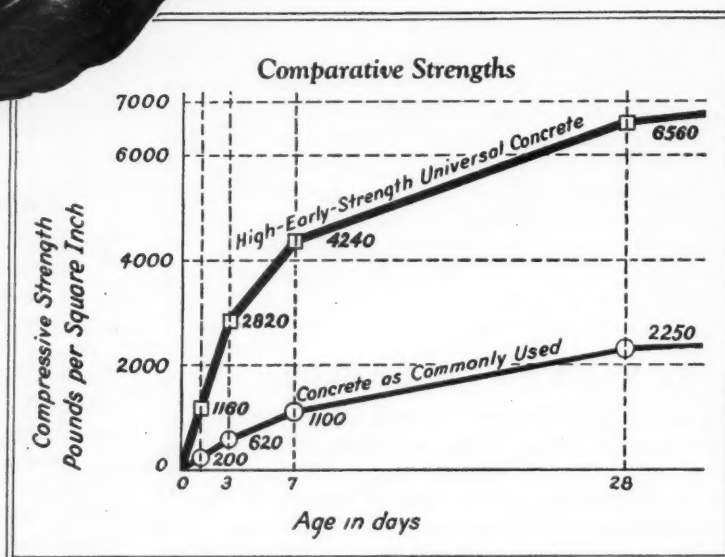
With the same Universal cement that has been used over a quarter of a century for durable concrete, you can secure in 3 days stronger concrete than is commonly obtained in 28 days.

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# EVERYBODY'S BUSINESS



## Watch Your Step!

By Floyd W. Parsons

IT seems that very few of the yardsticks of yesterday can now be used to measure tomorrow. Many of what we thought were proved principles no longer command respect. Dozens of rules that appeared to be infallible have been cast into the discard. The trend of security prices has been so violently upward that the careful investor is finding it difficult to maintain a proper perspective. Among the speculative fraternity the conclusion has grown that it is a waste of energy to give consideration to intrinsic values or to try and establish a relationship between stock prices and earnings.

Humanity is steadily climbing upward, but life as a whole remains a jumble of wisdom and folly. Truth and justice continue to march along the same road with superstition and prejudice. Recently the Japanese spent \$2,000,000 in burying their Emperor to the accompaniment of sacred oxen and all the absurd rites of ancient dynasties. At the same time they were putting into operation a new subway with coin-in-the-slot turnstiles and, on the walls, advertising placards done in the latest New York manner.

Education in America has reached a comparatively high level, and yet a lot of people go in for the interpretation of dreams. Many place faith in pocket pieces and dozens of aviators wear a talisman. We cling to age-old beliefs about black cats, broken mirrors, pearls, opals, ladders and a rabbit's foot. The superstition about the ground hog's shadow still persists and the traveler at the Pullman window finds that the last seat to be sold is number 13.

The average mind still desires to reach quick conclusions—to accept lazily broad general solutions of problems, rather than go to the mental labor of working out more logical answers. Knowing the earth as we do, we laugh at the writings of Pliny and the other eminent scientists of old who told of races of people having but one foot each, and mouthless tribes who lived entirely on the scent of flowers and fruit.

But who can say that the absurd stories of sea horses and fire-breathing dragons which people believed 20 centuries ago will be regarded in the future as more ridiculous than our present conception of gravity, the fourth dimension, the vortex theory of matter, and the forces of interstellar space.

It is only our egotism that causes us to believe that Divine wisdom has suddenly descended upon our generation.

We feel contempt for the stupidity of yesterday and yet go on being victimized in wholesale fashion by the same old fakes dressed up in different clothes. The old-time crook worked single-handed and his winnings were limited. The modern cheat surrounds himself with the smartest of lawyers who are paid handsomely to keep him out of jail. So-called "sucker" lists with 15,000,000 names are now available to the faker who has a plan to fleece trusting individuals seeking to get rich quick. Hundreds of "tipster sheets" are still being used to market great quantities of worthless securities. Like most everything else stock swindling is being conducted at present on a mass-production basis.

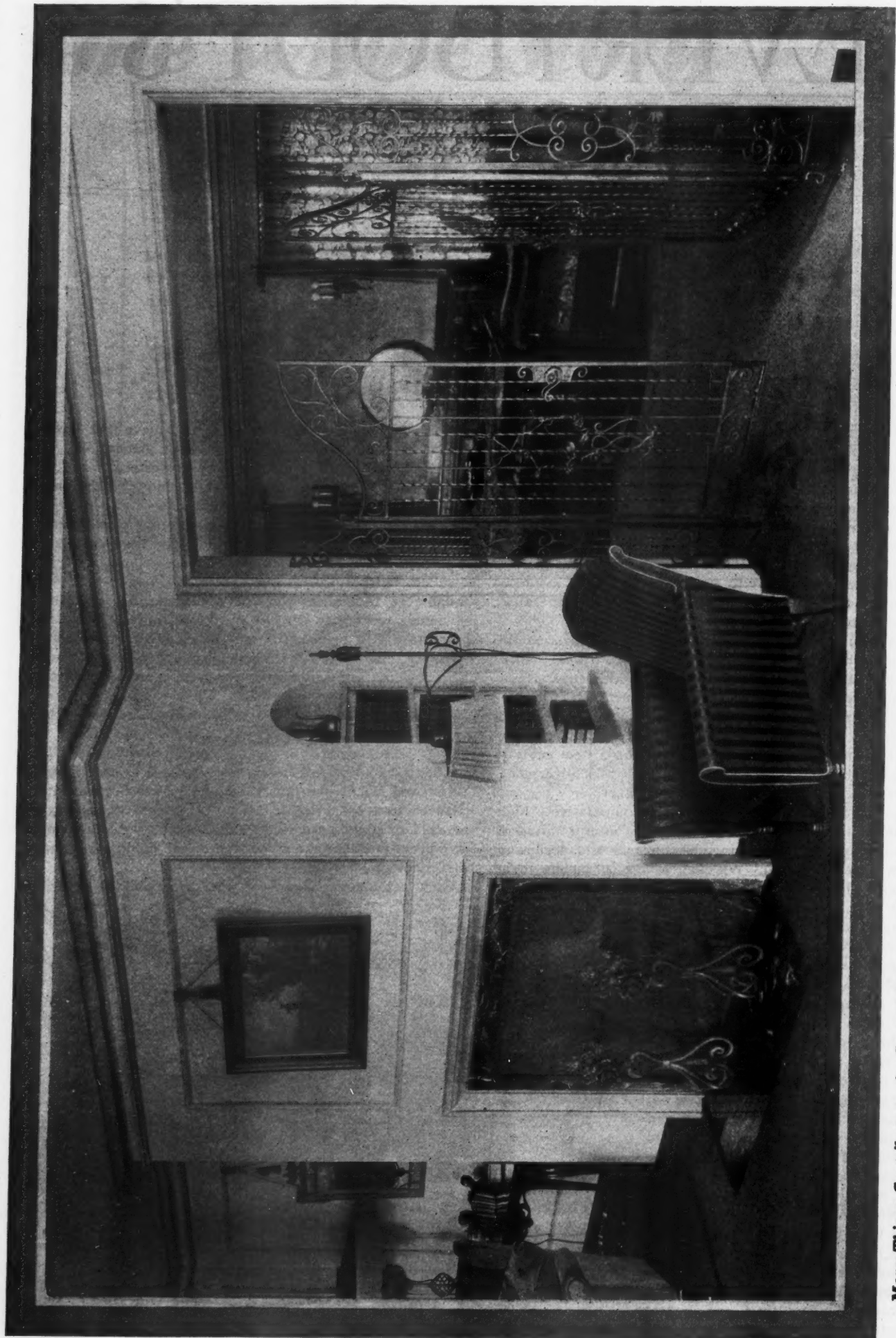
While business morals are on a higher plane than ever before, the pitfalls as well as the opportunities for the venturesome dollar have increased tremendously. The benefits to humanity from recent advances in true science are beyond calculation, but these gains have been counterbalanced to a considerable extent by endless quackeries in the field of pseudo-science. Shrewd and avaricious people have been quick to take advantage of the public's ignorance of technology.

Each astounding disclosure that is sound in principle



The Old Hokum Is  
Still with Us.





Many Things Contribute to the General Effect of a Well Designed Home, but There Are Certain Characteristic Details Which Mark Any House as Not Only Distinctly Modern, but Also as the Product of Excellent Design and Workmanship. Here in the tasteful use of paneled walls, wrought iron gates, wall niches for books, and similar refinements, the T. H. Maeneer Co., of Omaha, Neb., has produced a model of good design.

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and practice offers a new opportunity for the faker to capitalize human gullibility. Fraudulent enterprises by the hundred have been built up on the misapplication of well known scientific theories. We are surrounded by methods and devices that put iron into our blood, cure numberless ills by means of ultra-violet irradiations, insure our business success by utilizing a variety of vibrations to render us "harmonious with unseen omnipotence," and that recharge us with power through the application of an electric warming pad which we buy at ten times its actual cost. A multitude of fantastic cults solicit our attention and a great army of amateur psychologists blare forth a scientific phraseology that sounds impressive but is mostly bunk.

Electrons and protons, being no more than convenient assumptions even to the scientist, become useful tools in the hands of the swindlers. They prattle about "solar biology," "cosmic symbolism," "esoteric psychology," "spiritual alchemy" and "atomic relationships." For a fixed fee we are offered an interpretation of secret messages from occult powers. Gland extracts are advertised to multiply our sex appeal and enable us to withstand the ravages of age. Mysterious applications of color and sound are guaranteed to restore the vigor of youth, and to be irresistible in love, it is only necessary to adjust respiration to a meter that entails slow and rhythmic breathing.

How nonsensical! And yet the public falls for it. So it has been and will be as long as pseudo-science is permitted to graft itself upon the tree of knowledge. Honest advertising has greatly increased its defensive, but the crook has also increased his offensive and now employs methods that are far more subtle than those of the past. Current propaganda is so cleverly constructed that even the worldly-wise find it difficult to identify the plots that are filled with deceit and intended to entrap.

Even in the field of big business, it is hard to distinguish between the good and the bad. Contacts with the public are so skillfully directed by experts that very little is left to chance. Modern management does not guess at the state of public opinion—it demands to know the precise nature of favorable impressions and ungrounded prejudices. It bases corporation policies on programs that create the day's news as well as the circumstances, and these programs are shaped to fit periods of years, not merely to produce a sensational bang that startles the world today and is forgotten tomorrow.

Propaganda touches our senses each minute of every waking hour. The immediate outcome of any slackening of trade is a flood of words to make us conscious of heretofore unappreciated opportunities and benefits. We learn of new economic and dietetic values by the hundred, discover that skirts should be longer, the atmosphere cleaner, distracting noises eliminated, and that destructive fires might be prevented. In this way our every-day problems are illuminated and as a result we improve public health and reduce waste. Incidentally, there is an increase in the sale of foods, textiles, smokeless fuel and electric welding machines. Life and property are conserved and great

insurance companies multiply their earnings.

Progress and self-interest cannot be separated. Educational forces cannot be restricted to the use of the purely philanthropic. But we can learn the value of caution and discrimination in accepting statements of opinion. The editor can reject material that is ethically doubtful that has no mark of responsible origin, and that does not stand out in the news of the day. The radio listener can tune out and the motion-picture patron can effectively express dislike for insidious propaganda.

So it is true that the remedy for dishonesty in education is more education. Even the Governments of the world have discovered this fact. What they learned about publicity during the World War is now being applied to statecraft with all the force and ingenuity that clever minds can muster. Uncle Sam is now establishing his own official press agents at the great capitals to help combat the effects of mistaken notions on the part of peoples overseas. Desirable federal undertakings will be simple when adequate machinery is available to keep the public properly informed.

We are now riding the crest of a great tidal wave of self-improvement. But it is still a long way to the end of our present adventure with rascals who trade in deceit. Even the conclusions and recommendations of well-meaning enthusiasts today may bring an aftermath of distress if one does not practice caution and restraint. The stories of huge fortunes made quickly in the stock market have caused a great many people to decide that speculation is a more profitable vocation than legitimate business.

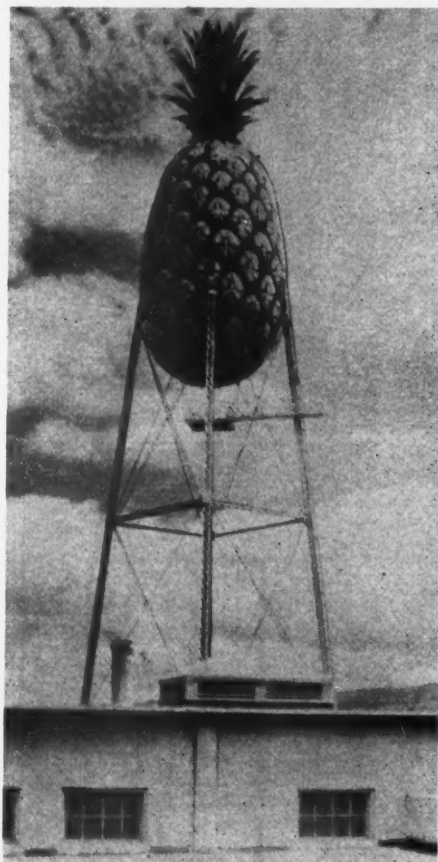
In the end it will be disclosed that the best policy is

one that demands reasonable interest and utmost safety for the greater part of one's funds. Time will show that values do have a direct relation to price movements; that often the most expensive money a person can make is by winning on a chance shot in the stock market; that a bond is a corporation debt and a stock is not; that responsible bankers knew what they were about when they set out to guide credit into business rather than speculative channels; and that the law of action and reaction is still operative.

In the last eight weeks we have witnessed the organization of additional investment trusts having a capitalization of more than half a billion dollars. All the investment trusts in the United States 18 months ago did not have a total capitalization that great. Only 29 investment trust companies were organized in the United States prior to 1925, while the number now in existence is estimated to be more than 200.

Like many other new things the worth of the investment trust idea must be proved.

The present is no time to take things for granted. Developments are coming so fast that the slightest relaxation of vigilance is likely to turn success to failure. Current accomplishments are so highly favorable that we may well regard the future with hope and optimism. But let us not forget that we are using new machinery and handling strange forces that may suddenly cut up in a most unexpected manner. Business must watch its step.



### Giant Pineapple

THE largest pineapple in the world greets the Hawaiian visitor's eye as his boat approaches the dock at Honolulu. It is mounted atop of the Hawaiian Pineapple Company's four-story office and warehouse building and is a 100,000 gallon water tank especially shaped to advertise the company's product.

I. N. F. S.



# These 6 Homes won 1<sup>st</sup> in Detroit

## Model 6 Room Homes Built by a Newspaper

THE home design that wins the architectural competition is not always the best home to build. It depends a good deal on who did the judging—and who sponsored the competition.

However, when the Detroit "Free Press" invited home

designers to compete for six five hundred dollar prizes they undertook to create a group of better home plans that would be popular and practical as well as artistic. The cost was to range from \$9,000.00 to \$16,000.00; and no limitation was placed on the materials to be employed.

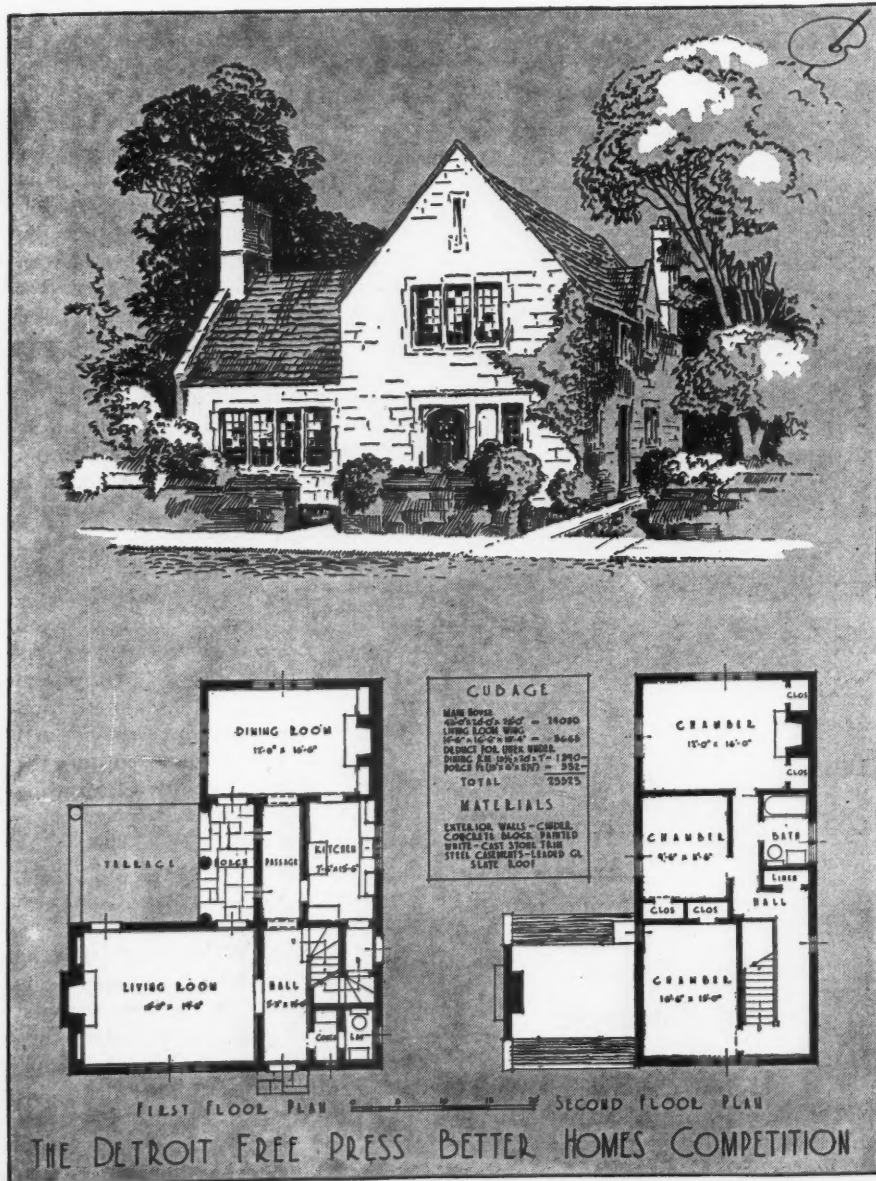
One hundred eighty-eight architects and draftsmen from eleven states responded to the invitation and submitted drawings. The six which the jury placed first are presented herewith.

What do you think of them for use in the territory where you operate? Would they be popular sellers?—a good investment for the merchant-builder, building for sale? Or do they contain valuable suggestions and features you can incorporate into homes you specially plan and build on contract?

A decided trend toward the designing of homes for exterior wall construction with combinations of materials—with a majority of designs calling for masonry construction—was evidenced by these 188 designs. Brick and stucco used architecturally in combination seemed to have preference among the designers. Exterior treatment also showed a decided inclination toward English rural and French influence, with comparatively few English Colonial or Dutch Colonial or Spanish mission, which a year or two ago were so popular.

For the builder who is constructing homes for sale, results of this current competition as to present popularity of design and style may supply valuable information. Architects and draftsmen submitting designs in the Detroit "Free Press" competition—most all of them young men who have small house designs on their drafting boards as commissions from individual or speculative home builder clients—are likely to have their fingers on the pulse of current demand as to choice of materials and architecture.

As a sequel to this competition the first six prize winning designs have



A First-Prize Design Submitted by David D. Demmy, Harrisburg, Pa., Shows a House of English Tudor Design to Be Built of Cinder Concrete.

# How Would they Rate *with* You?

*Too Large? Study Them; They May Be Just Right*

been constructed by Detroit builders for demonstration to the public in Detroit as model homes, under the auspices of the "Free Press," with the co-operation of the Home Owners' Institute.

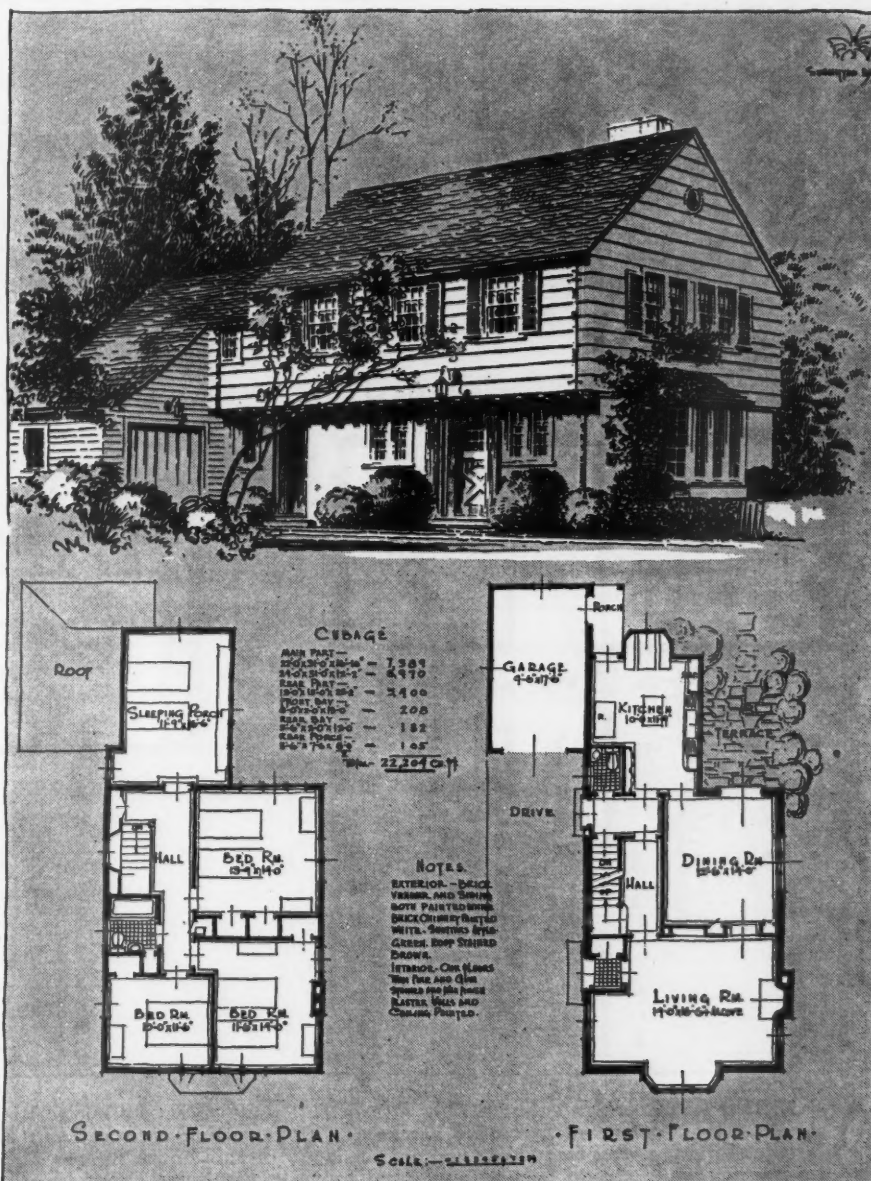
The jury consisted of three Detroit architects: John W. Case, Marcus M. Burrowes, and William B. Stratton.

Four of the first prize winners were Detroit men: Amedeo Leone, Milton E. Proutt, Kurt Steinbach, and Russell E. Yates. Alfred Kastner and John Donald Tuttle, of New York City, and David D. Demmy, of Harrisburg, Pa., were the two other prize winners. Six honorary mentions were awarded the following designers: Livingstone H. Elder, LeRoy E. Kiefer, J. W. Leinweber, and Amedeo Leone, of Detroit; C. E. Shaw, of New York City, and Walter J. Thies, of Dayton, Ohio.

Mr. Leone, who won both a first prize and an honorary mention, a year ago won first prize in the architectural competition for small houses conducted by the Common Brick Manufacturers' Association, and in 1927 won second prize in a similar competition conducted by the Chicago "Tribune."

Among the twelve designs singled out by the Jury of Award one was of frame. The eleven others were designed for combinations of materials, with brick and stucco specified in all but two of these. Two called for frame siding above the first floor walls. One of the first prize designs was a two-family type, drawn by Messrs. Kastner & Tuttle, of New York City. The others were all six room designs, with garages, and the majority called for a lavatory on the ground floor in addition to the bathroom on the second floor.

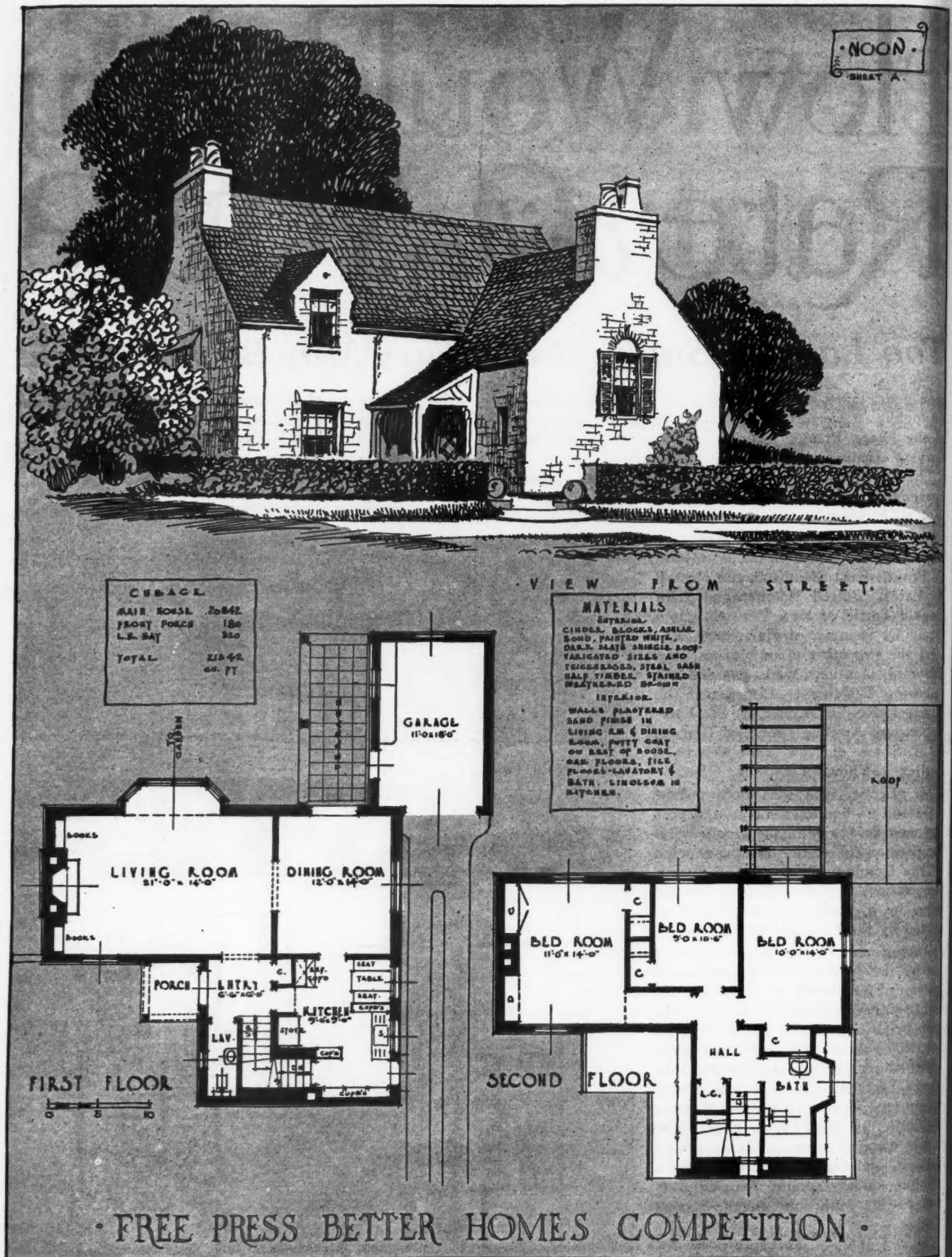
One of the rules of the competition was that the designs should be within a construction cost range of between \$9,000.00 and \$16,000.00. The "Free Press" has made the plans of the prize winning architects available to public at low cost.



A First-Prize Design Submitted by Kurt Steinbach, Detroit, Shows a Colonial Home with Overhanging Second Story, Bracketed Out to Protect Entrance.

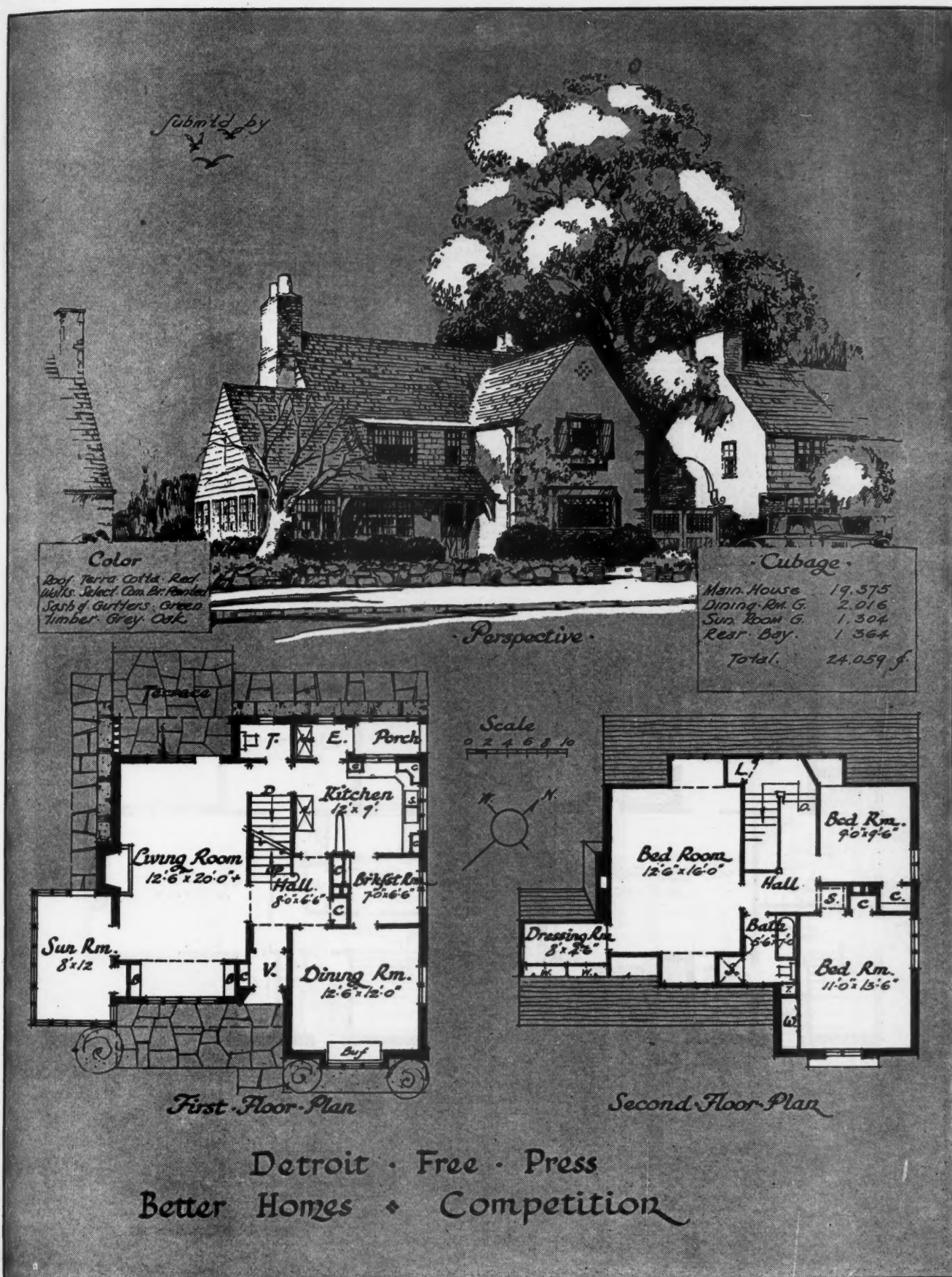
**THE** house built from  
a prize winning de-  
sign should sell for more.





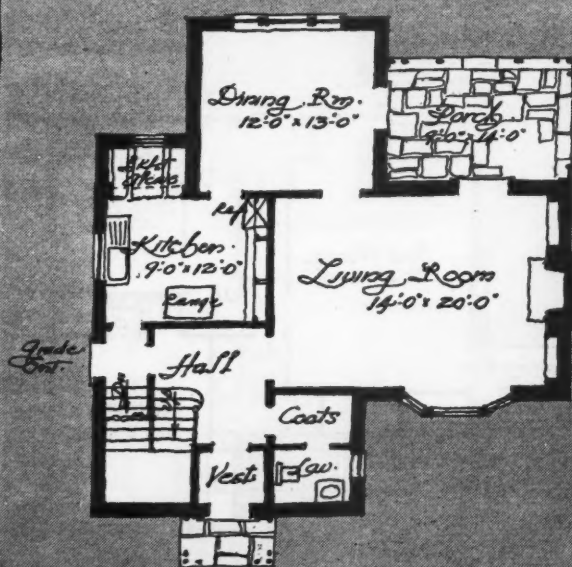
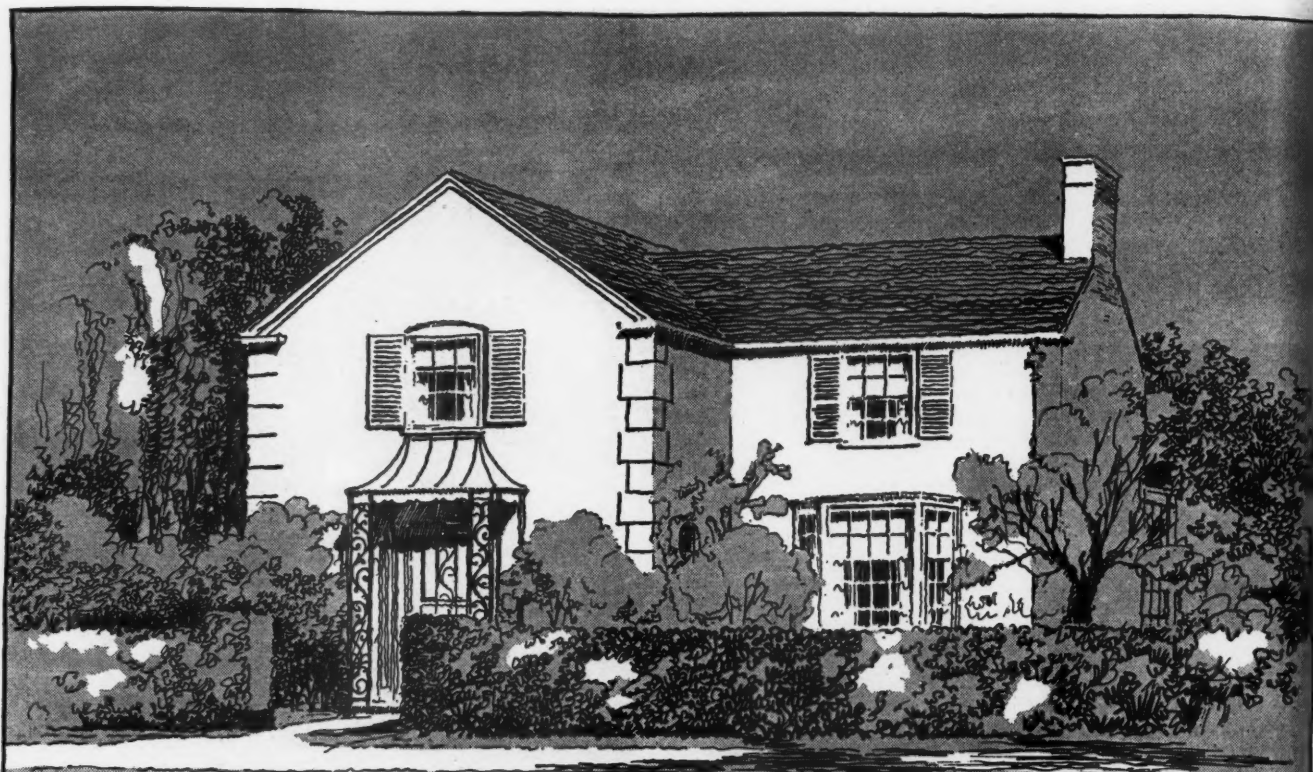
**A** FIRST-PRIZE design submitted by Milton E. Proutt, West Lafayette Blvd., Detroit, illustrates a home of massive lines to be constructed of cinder blocks (or Indiana limestone veneer) and slate roof. Six rooms and bath and attached garage are provided. The cubic capacity of this house figures 21,342 cubic feet. The designer recommends that the interior walls should be plastered sand finish in the living room and dining room, and putty coat on the rest of the house. Oak floors to be used throughout, except for lavatory and bath, which would be tiled, and the kitchen, which would be linoleum cemented down, to felt over softwood flooring.

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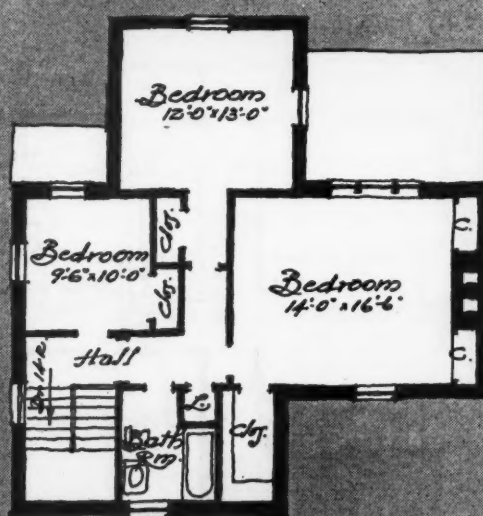


**A** FIRST-PRIZE design submitted by Russell E. Yates, Marquette Building, Detroit, illustrates a home of English design to be constructed of common brick with roof of slate, clay tile, cement tile, or asbestos shingles in terra cotta red color. An exceptional amount of glass is used in this design, making a home of great cheerfulness. There are six main rooms besides a sun room, breakfast room and reception hall on the first floor, and dressing room and bath in the second floor. The cubic capacity of this house figures 24,059 cubic feet. The color scheme suggested by the architect for the exterior is to stain the brick light and the window trim, including shutters, painted green. The rough hewn timbers supporting the porch would be oak stained gray.





First Floor Plan



Second Floor Plan

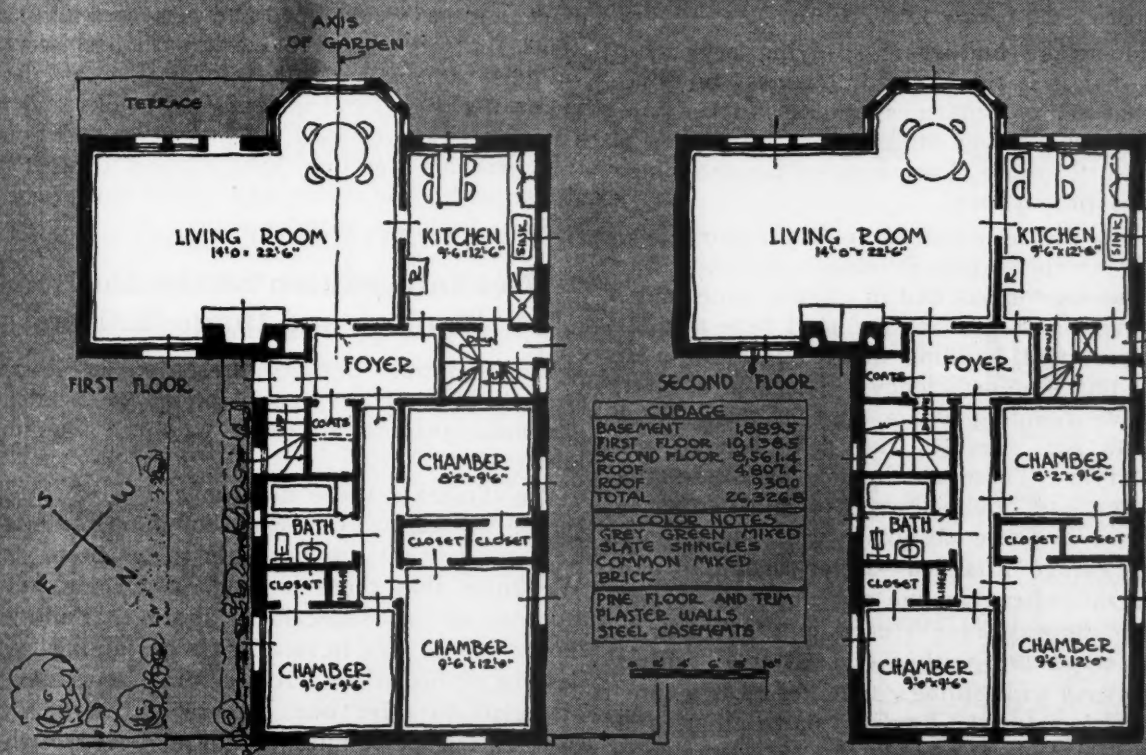
**Cubage:**

A. 15'-0" x 14'-0" x 7'-6"	= 5005 cu. ft.
B. 20'-0" x 24'-0" x 7'-6"	= 13200
C. 15'-0" x 16'-0" x 7'-6"	= 6600
D. 9'-0" x 14'-0" x 10'-0"	= 630
E. 7'-0" x 4'-0" x 16'-0"	= 448
<b>Total</b>	<b>25883</b>

**Materials**  
 Exterior to be of white washed brick or sand face brick. Woodwork painted white. Iron work & shutters apple green. Brown shingle roof. Interior woodwork painted. Fire place end panelled in wood. Rooms with paper. Kitchen painted. Bathrooms tiled. Elec. Ref. Steam heat.

**A** FIRST-PRIZE design submitted by Amedeo Leone, Marquette Building, Detroit, has a decided French atmosphere. For this bit of New Orleans or the North of France, the materials suggested by the architect are white-washed brick for the exterior, wrought iron work painted green, and roof of brown shingles. Six rooms, bath, first floor lavatory, breakfast alcove, reception hall and stone flagged private porch are provided in this interesting design. Cubic capacity figures 25,883 cubic feet. The interior woodwork should be painted; the entire fireplace end of the living room panelled in wood.

**A** really closets to land



## DESIGN FOR A DUPLEX RESIDENCE

**A** FIRST-PRIZE design—a duplex residence—submitted by Alfred Kastner and John Donald Tuttle, East 46th Street, New York City, presents a delightful solution of the two-family home for the high-grade residential neighborhood. This design gives two beautiful apartments upstairs and down, each containing five rooms and bath; really six-room efficiency since the big alcove in the living room accommodates the dining table. An abundance of clothes closets are included for each of the apartments. Such a building placed on a fifty foot lot and with proper attention to landscaping would make a beautiful home, a credit to any neighborhood and an investment that would be self-supporting.





# EXHIBIT OF GOOD BUILDINGS

**W**E are in an age of style—and style, or the lack of it, today spells success or failure in many lines of business which formerly were considered outside of or above such vagaries.

The wide-awake builder is studying style, for he knows that it is the home or business building of style that sells. Smartness and distinction are not easy to secure; yet buildings of good design really cost little more than those of commonplace or awkward proportions.

In selecting the designs for our "Exhibit of Good Buildings" for this April Reference Number, our Architectural Editor has had in mind a wide range of requirements. There are included here a modern city apartment building divided into units of small size but large efficiency. There is a retail shop or store building and a page of ornamental garden structures, besides the collection of six homes of style. These six include three designs of fairly large size, one medium size, and two small homes. Two of these designs are arranged with house and garage attached—a very popular and practical arrangement in line with modern living. Two of the houses have stucco exterior, one is brick and three are with wood exterior, either shingled or with wide siding. One design is a combination brick, stucco, English half-timber, and shingles. The designs include the Mediterranean, Elizabethan, New England Colonial, Dutch Colonial and Modern French.

In all of these designs close attention has been paid to present-day requirements in labor-saving equipment, and the specialties and appointments which mean so much in the home that is truly modern. These specialties are listed in connection with these designs, and the wide-awake builder will naturally want to be thoroughly familiar with what the market offers.

We present these designs here in the editorial pages of the *AMERICAN BUILDER*; but the *specifications* for executing and completing these designs should be drawn from the advertising pages. Manufacturers have developed and perfected all of these items, and are eager to work with architects and builders, furnishing all information as desired. Write for their catalogs and handbooks and make a study of each class of equipment so that you will feel perfectly familiar with it and competent to advise with your clients and others concerned with modern building improvements.

## Free Information Service for Home Planners and Home Builders

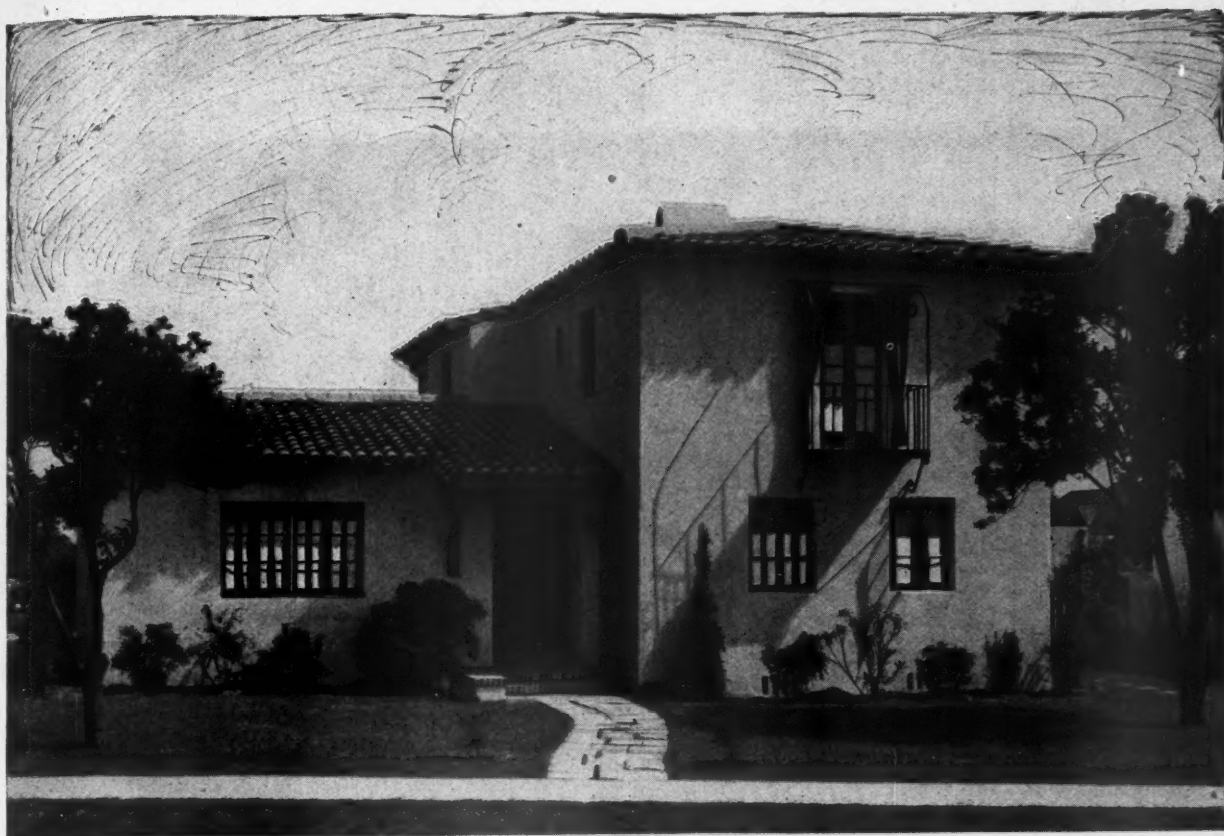
The building designs presented in *AMERICAN BUILDER* have many special points of excellence of particular interest to those who are planning to build.

We illustrate these designs and show the floor arrangements, but our space for description is limited, so that we are not able to cover all details. We know that there is much additional information which our subscribers about to build would like to have. We have all data pertaining to these designs on file in our Architectural Department and are glad to offer our readers a free service of information pertaining to these designs, whether questions relate to the estimated cost, method of construction, suitable materials to use, special equipment or features, or any other information whatsoever.

Limited space in the magazine prevents publishing all of this information, but if you will write the American Builder Home Planning Service, 105 West Adams Street, Chicago, we will be very glad to give you direct by mail any information desired.

ARCHITECTURAL EDITOR.

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# For Those Who Want the Unusual

## Motifs from Mediterranean Shores Give Character to the Home Design

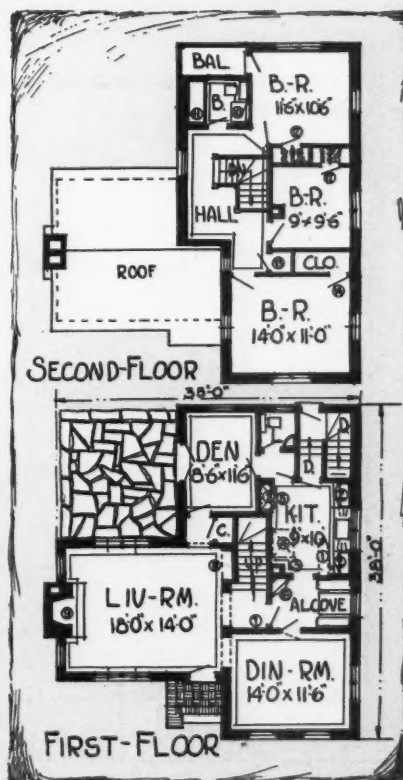
### Key to Recommended Specialties of Equipment

The small numbered circles on the plans represent the following:

- |                 |                                  |
|-----------------|----------------------------------|
| 1—Ironing Board | 8—Books                          |
| 2—Kitchen Cases | 9—Fireplace Throat & Damper      |
| 3—Incinerator   | 10—Medicine Case                 |
| 4—Range         | 11—Shower Bath                   |
| 5—Refrigerator  | 12—Space Saving Closet Equipment |
| 6—China Case    | 13—Linen Closet                  |
| 7—Phone Outlet  | 14—Mirror Door                   |

In addition to the above many items of modern equipment must be considered:

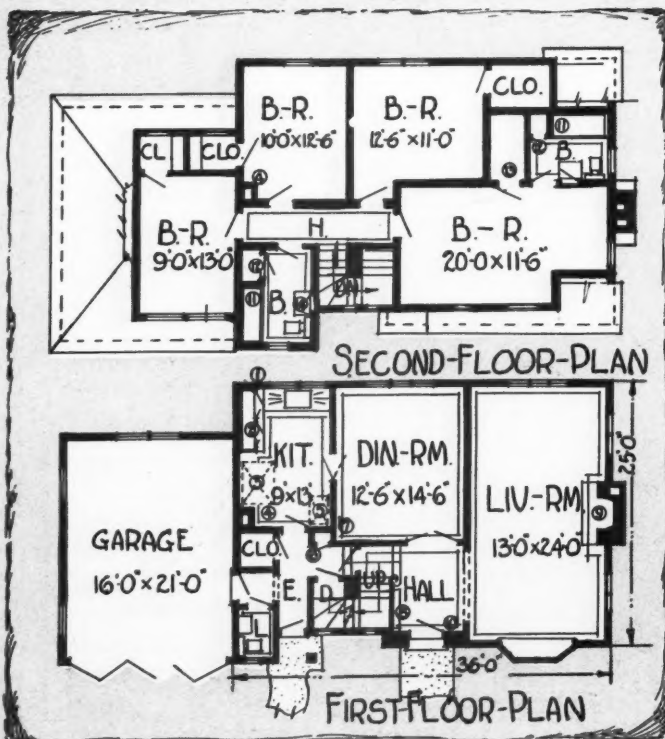
- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute
- Heating Plant
- Oil Burner
- Incinerator
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture
- Disappearing Attic Stairs







## Double Garage a Feature of This Impressive Home



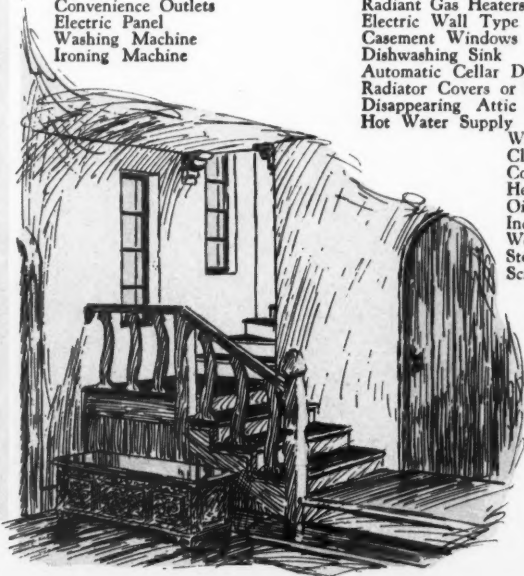
Sketch to right—Interesting Stair Treatment in Reception Hall.

### Key to Recommended Specialties of Equipment

- The small numbered circles on the plans represent the following:
- |                   |                             |
|-------------------|-----------------------------|
| 1—Ventilating Fan | 8—Telephone Outlet          |
| 2—Kitchen Case    | 9—Fireplace Throat & Damper |
| 3—Range           | 10—Built-In Mail Box        |
| 4—Incinerator     | 11—Shower Bath              |
| 5—Refrigerator    | 12—Linen Cabinet            |
| 6—Broom Closet    | 13—Moth Proof Closet        |
| 7—Thermostat      | 14—Medicine Cabinet         |

In addition to the above many items of modern equipment must be considered:

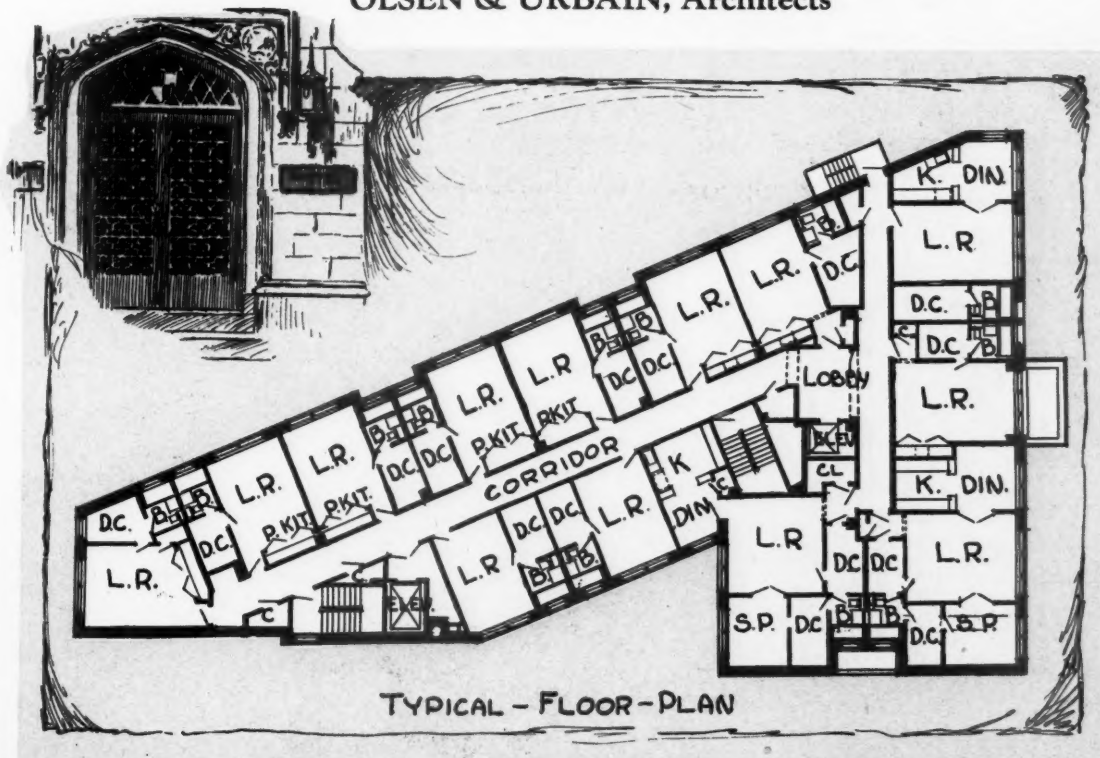
- |                     |                              |
|---------------------|------------------------------|
| Lighting Fixtures   | Water Supply System          |
| Convenience Outlets | Radiant Gas Heaters          |
| Electric Panel      | Electric Wall Type Heaters   |
| Washing Machine     | Casement Windows             |
| Ironing Machine     | Dishwashing Sink             |
|                     | Automatic Cellar Drainer     |
|                     | Radiator Covers or Furniture |
|                     | Disappearing Attic Stairs    |
|                     | Hot Water Supply             |
|                     | Water Softener               |
|                     | Clothes Dryer                |
|                     | Coal Chute                   |
|                     | Heating Plant                |
|                     | Oil Burner                   |
|                     | Incinerator                  |
|                     | Weatherstrips                |
|                     | Storm Sash                   |
|                     | Screens                      |



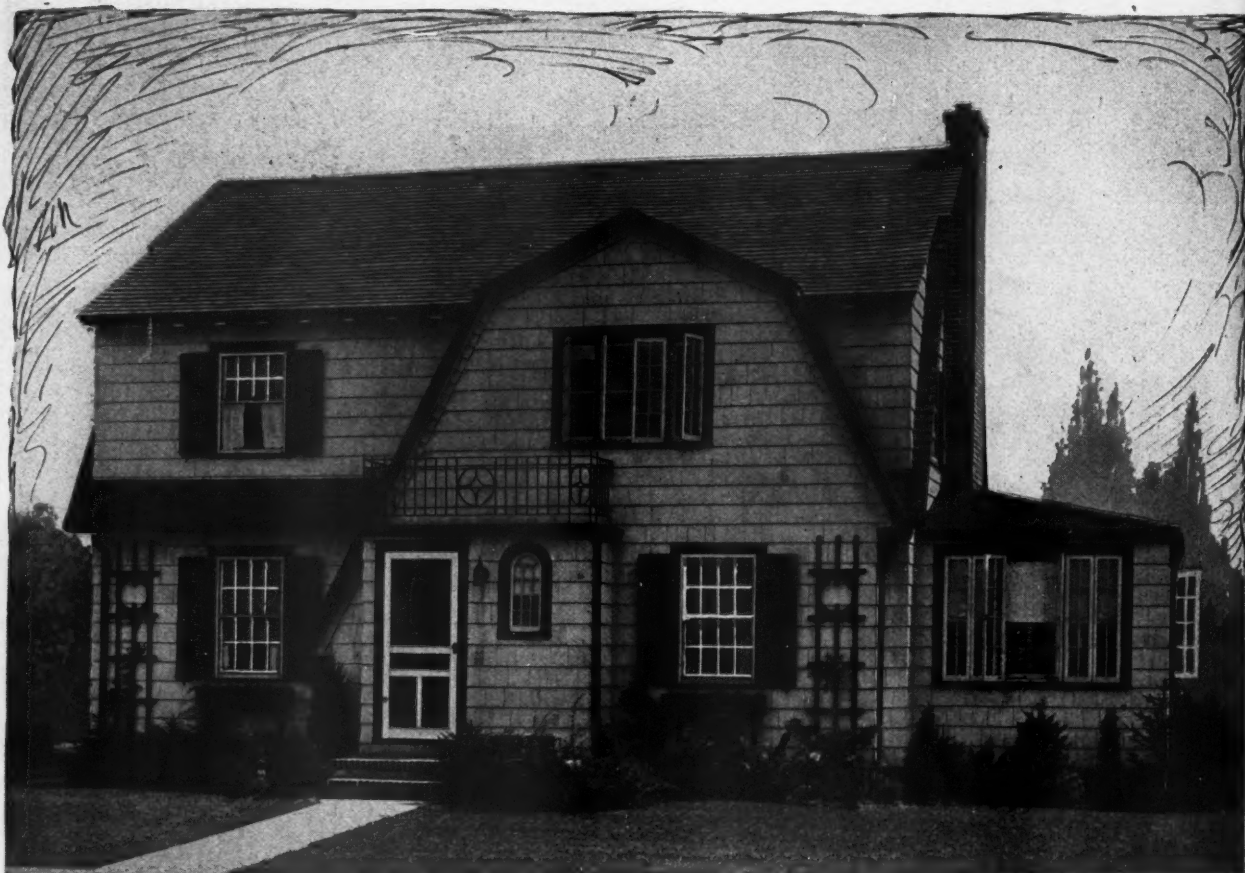


## Lincoln Park Manor Apartments, Chicago Improve a Triangular Site

OLSEN & URBAIN, Architects







## Ornamental Third Gable at the Front Emphasizes This Dutch Colonial

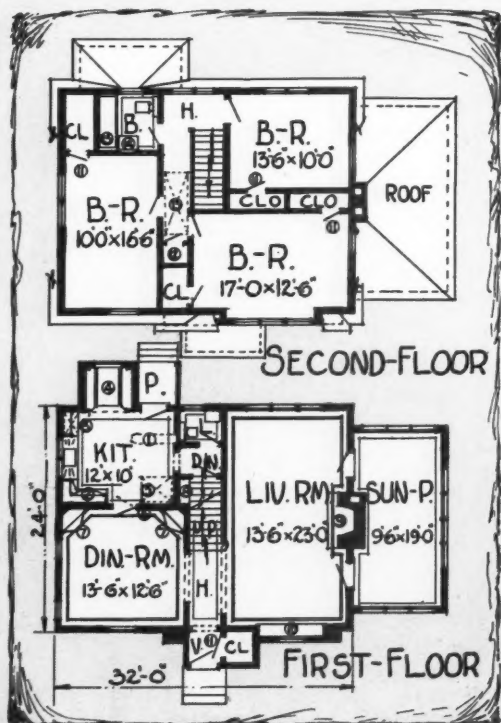
### Key to Recommended Specialties of Equipment

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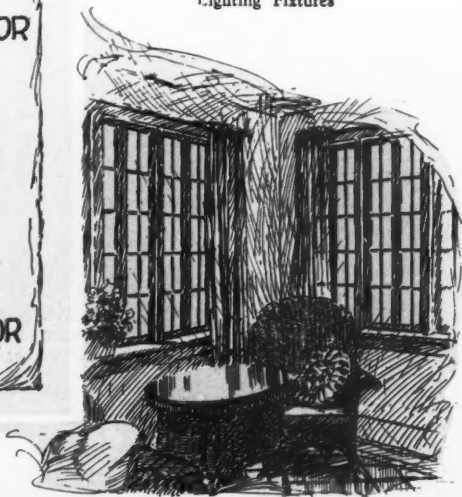
- |                    |                             |
|--------------------|-----------------------------|
| 1—Ironing Board    | 9—Fireplace Throat & Damper |
| 2—Kitchen Case     | 10—Window Seat              |
| 3—Refrigerator     | 11—Mirror Door              |
| 4—Breakfast Alcove | 12—Linen Case               |
| 5—Range            | 13—Disappearing Stair       |
| 6—Thermostat       | 14—Medicine Case            |
| 7—China Case       | 15—Tub Shower Bath          |
| 8—Broom Closet     |                             |

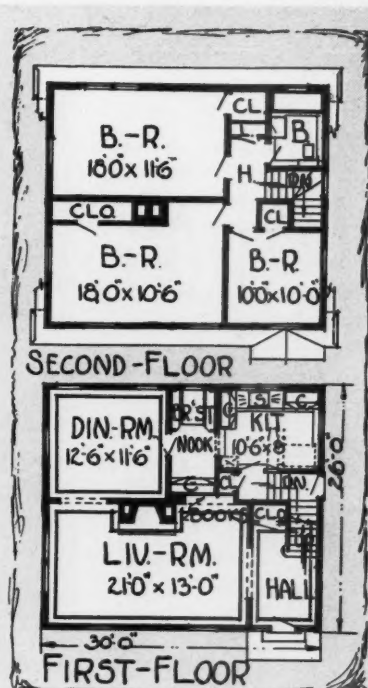
In addition to the above many items of modern equipment must be considered:

- |                   |                              |
|-------------------|------------------------------|
| Weatherstrips     | Convenience Outlets          |
| Storm Sash        | Electric Panel               |
| Screens           | Washing Machine              |
| Lighting Fixtures | Ironing Machine              |
|                   | Clothes Dryer                |
|                   | Coal Chute                   |
|                   | Heating Plant                |
|                   | Oil Burner                   |
|                   | Incinerator                  |
|                   | Water Supply System          |
|                   | Hot Water Supply             |
|                   | Water Softener               |
|                   | Radiant Gas Heaters          |
|                   | Electric Wall Type Heaters   |
|                   | Casement Windows             |
|                   | Dishwashing Sink             |
|                   | Automatic Cellar Drainer     |
|                   | Radiator Covers or Furniture |

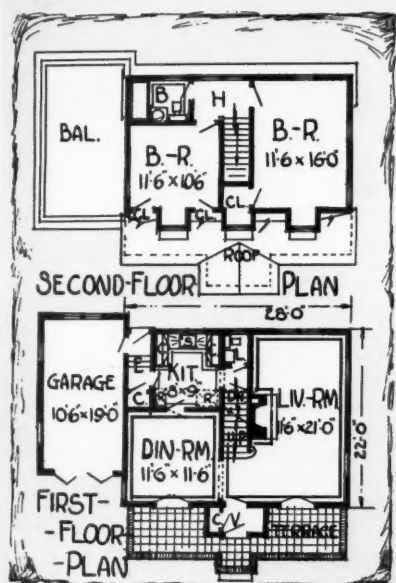


Sketch to right—Glimpse of sun porch.





## Large Satisfaction in These Small Homes



THIS is the day of the small home artistically designed, conveniently arranged and the acme of perfection in modern appointments and labor saving equipment. These small houses are modern palaces in miniature. They are not cheap by any means, although there is nothing about their design or construction that is extravagant. They would grace any neighborhood and prove a joy to any small family.

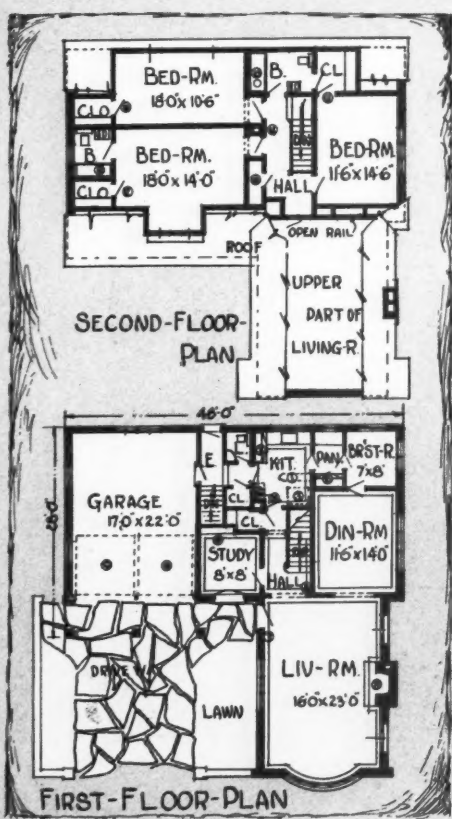
Study the floor plan diagrams and see how carefully planned these little homes are. The Dutch Colonial above contains six rooms, bath and breakfast nook, the New England Colonial home below, five rooms and bath and attached garage.







## Impressive Design With High Living Room, Sheltered Garden and Attached Garage



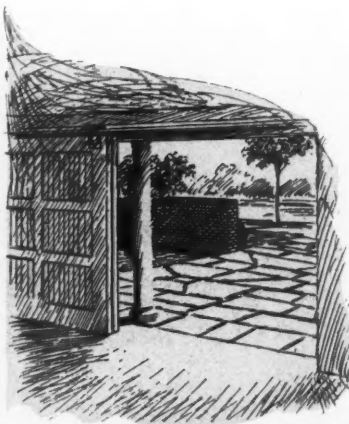
### Key to Recommended Specialties of Equipment

The small numbered circles on the plans represent the following:

- |                 |                             |                     |
|-----------------|-----------------------------|---------------------|
| 1—Ironing Board | 6—Book Shelves              | 11—Medicine Cabinet |
| 2—Kitchen Case  | 7—Built-in Mail Box         | 12—Mirror Door      |
| 3—Range         | 8—Fireplace Throat & Damper | 13—Linen Closet     |
| 4—Refrigerator  | 9—Overhead Garage Doors     | 14—Incinerator      |
| 5—Thermostat    | 10—Shower Bath              |                     |

In addition to the above many items of modern equipment must be considered:

- |                     |                              |
|---------------------|------------------------------|
| Weatherstrips       | Incinerator                  |
| Storm Sash          | Water Supply System          |
| Screens             | Hot Water Supply             |
| Lighting Fixtures   | Water Softener               |
| Convenience Outlets | Electric Wall Type Heater    |
| Electric Panel      | Radiant Gas Heaters          |
| Washing Machine     | Casement Windows             |
| Ironing Machine     | Dishwashing Sink             |
| Clothes Dryer       | Automatic Cellar Drainer     |
| Coal Chute          | Radiator Covers or Furniture |
| Heating Plant       | Disappearing Attic Stairs    |
| Oil Burner          |                              |





## A Retail Shop That Is "Different"

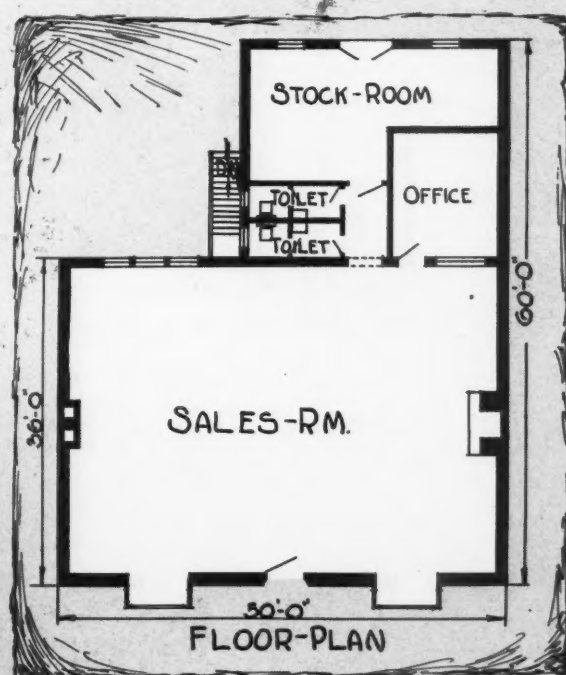
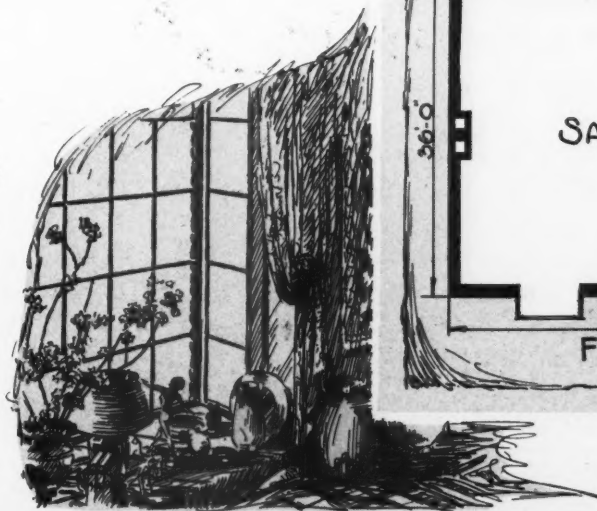
A Spanish Atmosphere Pervades This Los Angeles Gift Shop

MARSHALL WILKENS, Architect

EVERY thriving community today has its gift shop, sometimes known as Ye Olde Antique Shoppe. Quaintness of line has marked these salesrooms and their charm has influenced all retail establishments until today we find book stores, haberdashery shops, women's ready-to-wear and many other lines of retail business housed behind divided light show windows.

There is an air of exclusiveness and quality that is distinctly helpful to these lines of merchandising.

The southern Pacific Coast naturally favors the Spanish, while in New England we find the same ideas carried out in the early English, Dutch or Colonial style.

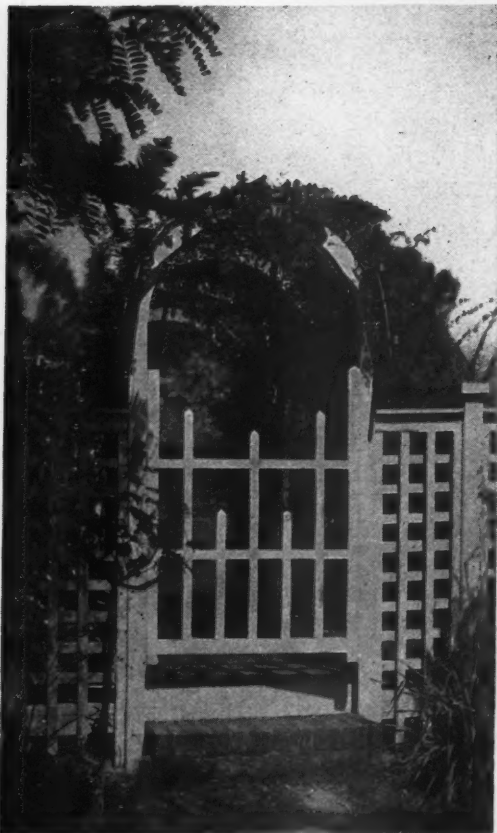


This salesroom is 34 by 48 feet with natural lighting front and rear.



# Ornamental Garden Structures

Trellises, rose arbors, arched gateways and ornamental fencing extend the delights of the home out into the garden.



The Merchant-builder has utilized only half his sales ammunition if he fails to develop and make attractive the grounds surrounding the new house.

The beautiful pergola to the right is on the estate of Mrs. Herman Oelrichs, Newport, R. I. The columns are of pressed metal.



# The ALL-FEATURE Home

## COMPLETE WORKING PLANS of the MONTH'S MOST POPULAR DESIGN



### *Modern Equipment is the Distinctive Feature Which Makes the Modern Home Readily Salable*

A HOUSE designed and equipped to make it attractive to the prospective purchasers and satisfactory to them after they have become the owners is the most profitable product of the builder. Such a house overcomes sales resistance and builds up goodwill which has a definite cash value. In offering the All-Feature Home to the readers of AMERICAN BUILDER who are actually engaged in building houses, we are offering a house which meets these requirements in every respect.

One glance at the photograph reproduced on this page is sufficient to convince one of the attractive appearance this house presents. Reference to the plans, reproduced to scale on the four pages following, shows that modern equipment has been the keynote in this design. Many of the specialties which distinguish the up-to-date home are clearly indicated on these plans. These include:

Complete electric wiring, fixtures and convenience outlets, an extra lavatory on the first floor, built-in kitchen cabinets, modern sink, cooking range and refrigerator in the kitchen, a linen cabinet in the bathroom, built-in laundry tubs, clothes

washer, mangle, clothes drier, modern heating plant, and water softener in the basement, an attached garage with modern garage door hardware.

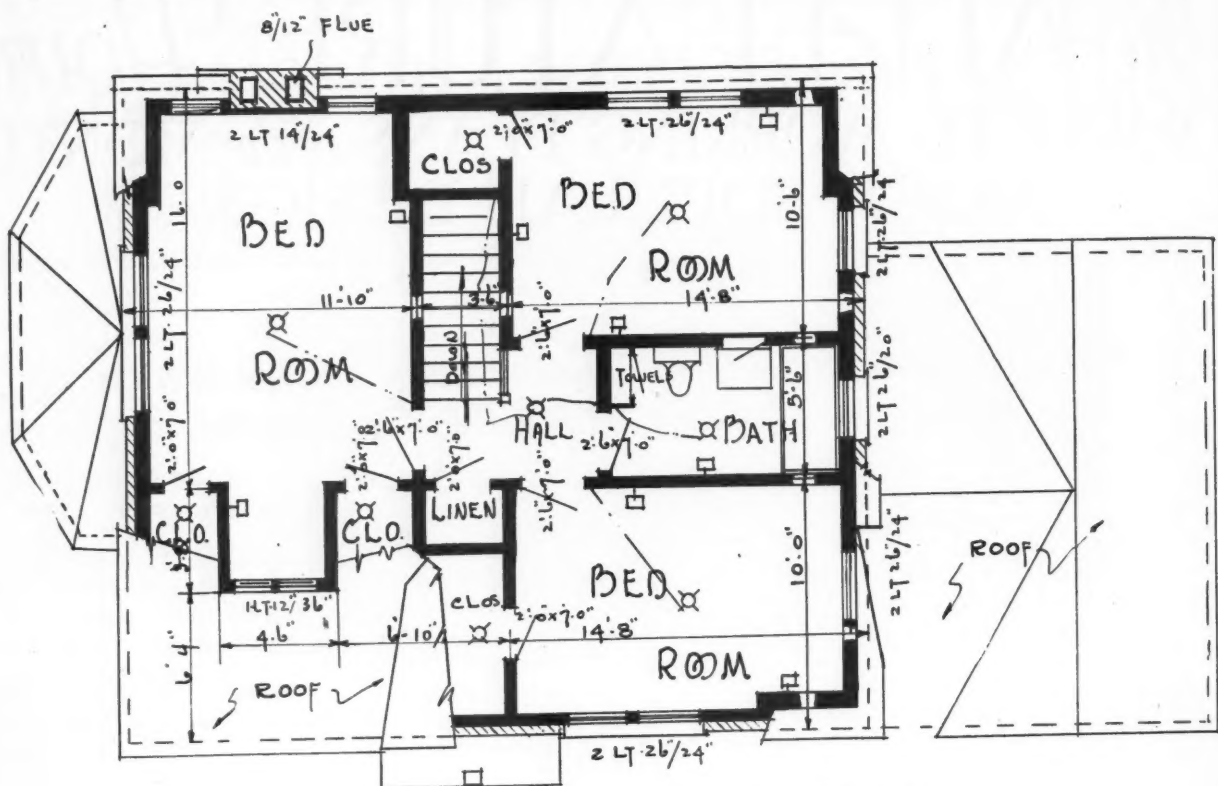
With this list as a guide, together with a reference to the advertising pages in this issue, the builder will be able to produce, from these plans, a house which he can easily sell at a good profit and which will, because of the satisfaction it gives to the owner, bring him additional customers for his future homes.

The builder should also consider: weatherstrips, storm sash, screens, casement windows, radiator covers and concealed radiators, disappearing attic stairs, thermostat heat control, built-in telephone cabinets and telephone outlets, built-in mail box, fireplace throat and damper, a dishwashing sink, kitchen ventilating fan, mothproof closets, space saving closet equipment, tub shower bath and shower enclosures, modern bathroom fixtures, medicine cabinets, radiant heaters both gas and electric, water supply systems, oil burners, gas and electric water heaters, automatic cellar drains, incinerators, electric panels and coal chutes.

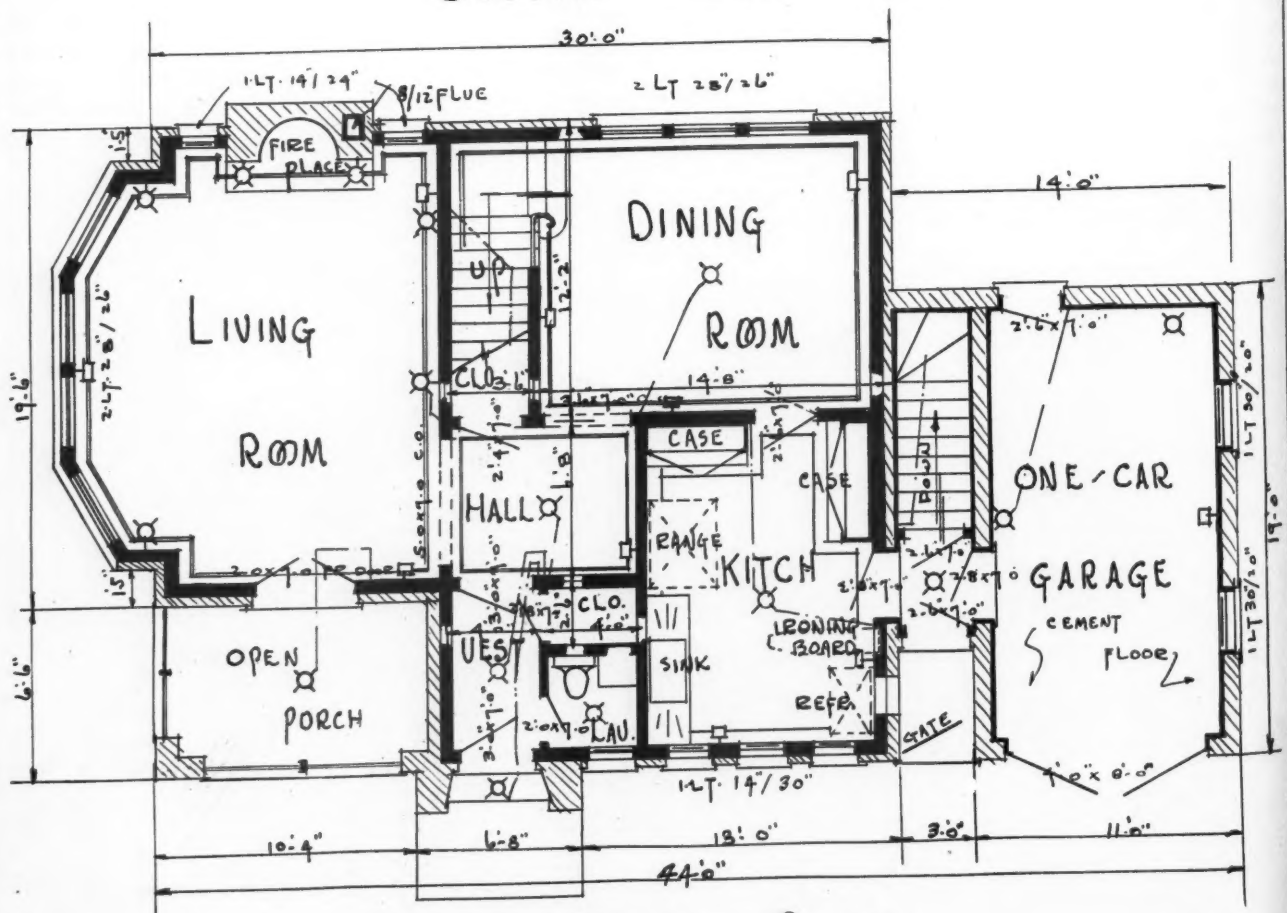


This Attractive All-Feature Home if Built from Plans as Shown on the Next Four Pages Will Provide for All Those Specialties Which Are Today Considered an Essential Part of Any Really Desirable Home.





• SECOND FLOOR PLAN.



• FIRST - FLOOR - PLAN.

SCALE  $1/8" = 10'$

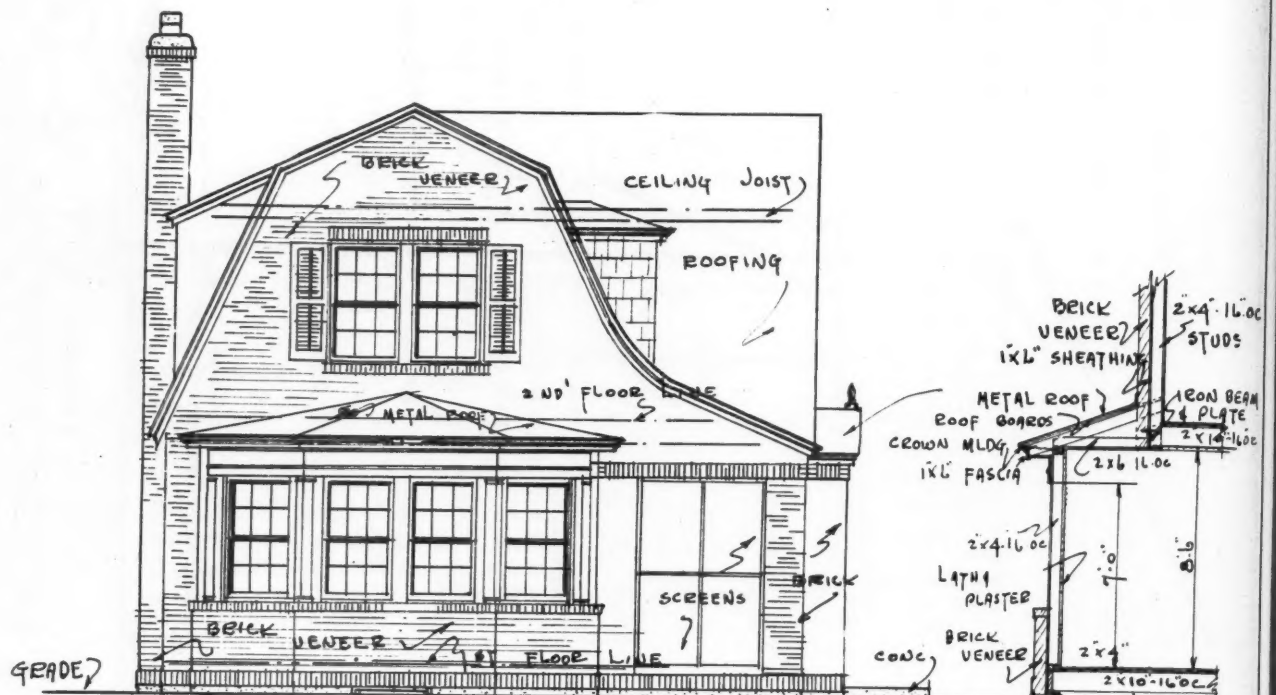
SHEET NO-1

Many of the Features of Modern Equipment Used in the All-Feature Home Are Indicated on These Floor Plans While a More Complete List Is Given on the Preceding Page.

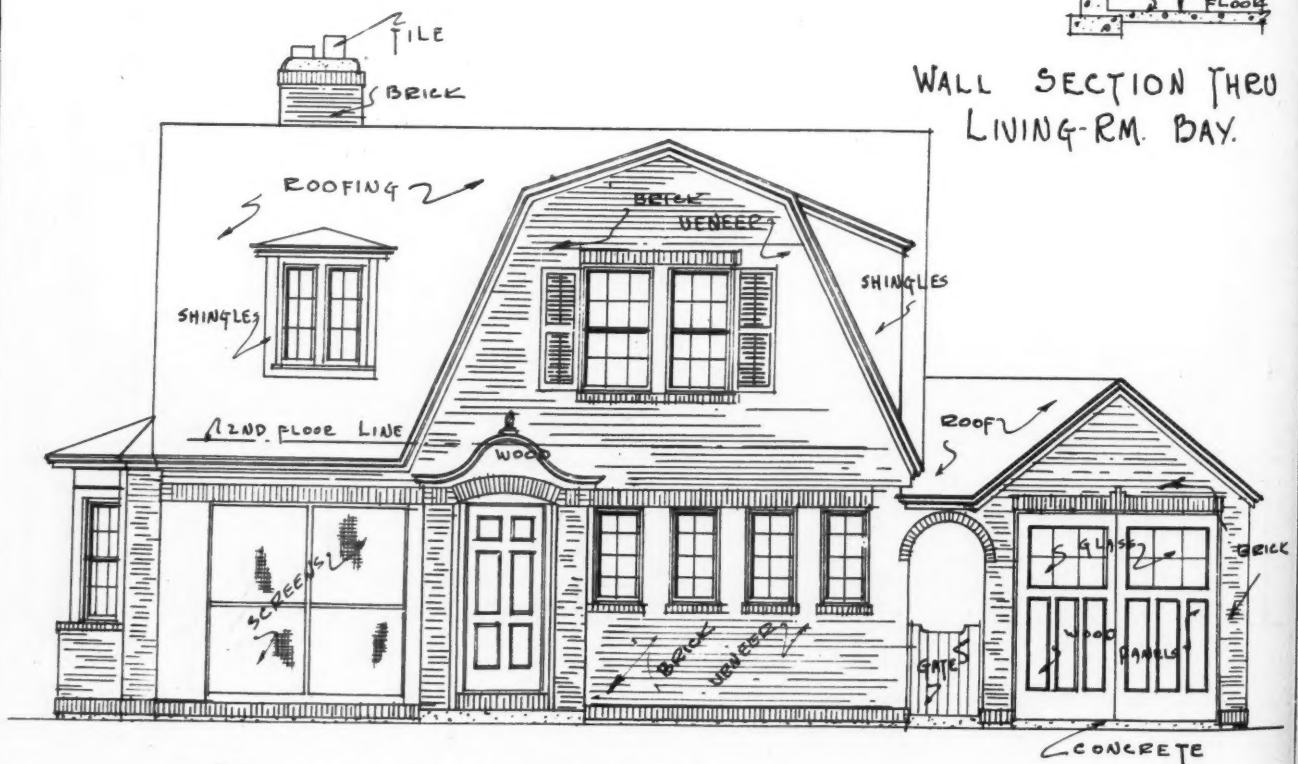


In the Basement of the Modern Home Will Be Found Some of the Most Important Items of Equipment, While Other Specialties Enter Into the General Construction as Indicated in the Wall Section.





· LEFT - SIDE - ELEVATION ·



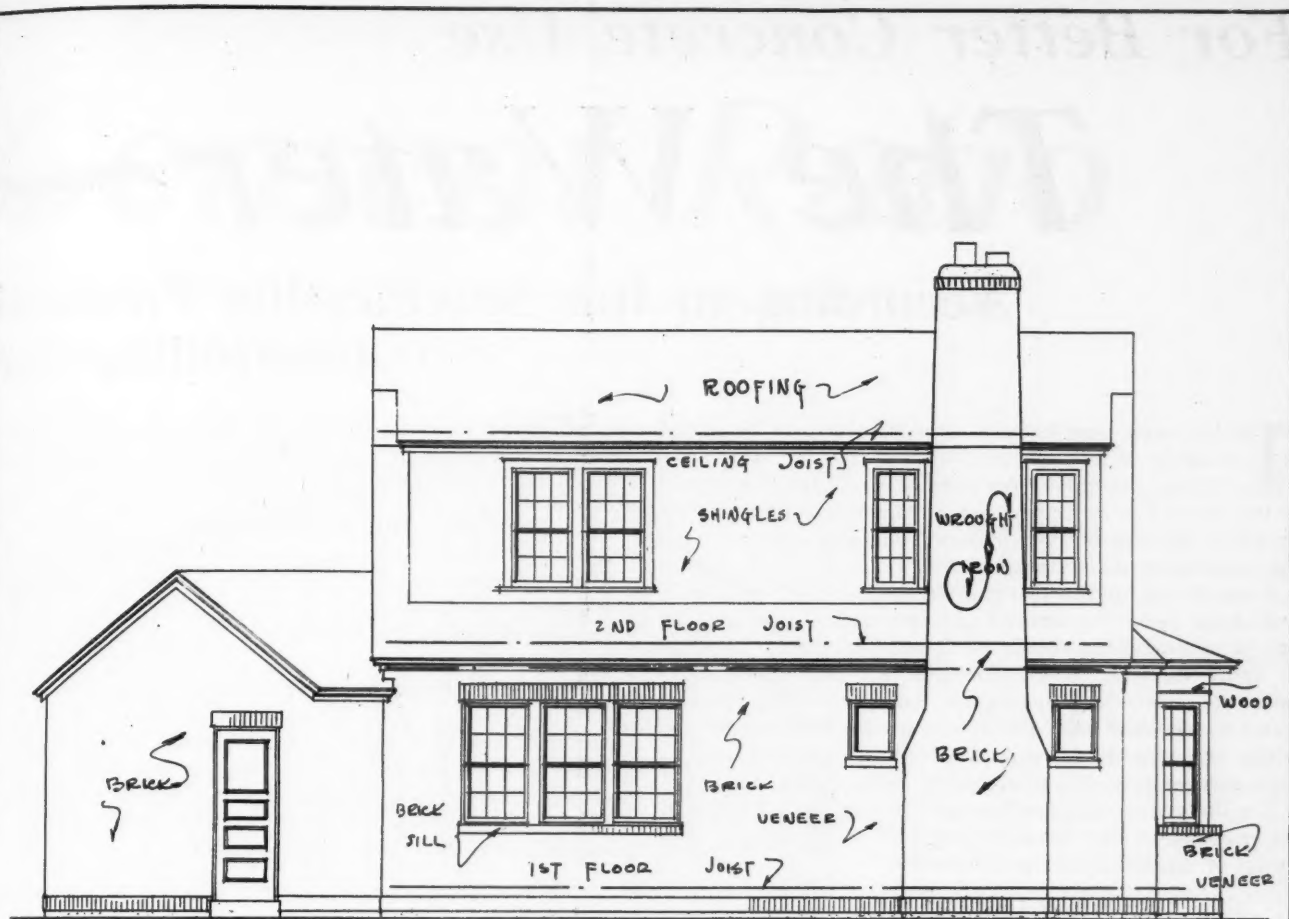
· FRONT - ELEVATION ·

SCALE  $\frac{1}{8}'' = 1'-0''$

SHEET NO-3

The Elements of Good Design, Which Produce a House of Attractive Appearance, Are Evident in These Elevation Views of the All-Feature Home.

Salab



REAR ELEVATION.



RIGHT SIDE ELEVATION.

SCALE  $\frac{1}{8}'' = 1'-0''$

SHEET No-4.

Salability, the First Essential Feature of Any House, from the Builder's Point of View, Is a Characteristic of the All-Feature Home.



## For Better Concrete Use

# The Water—

## According to this Specification Prepared Controlling the

**T**HE water-cement ratio strength law may be stated roughly as follows:

"The strength of concrete is inversely proportional to the amount of water per sack of cement used for mixing, provided that the mix is a plastic, workable one, and that the aggregates are clean and hard."

From this it follows that the strength of concrete is controlled by fixing the amount of water used in mixing, and not by proportioning the cement, sand and stone. In order to apply this law, specifications which give the proportions of cement and aggregates, but ignore the ratio of water to cement, must be superseded by modern ones in which the number of gallons of water to be used with each sack of cement are definitely stated.

The following specification for concrete shows how the water-cement ratio strength law can be embodied in a group of directions to the contractor:

### Water Cement Ratio

Concrete for structural members shall be proportioned to give the necessary workability without exceeding the following quantities of mixing water for the strength indicated.

Strength of Concrete of — lb. per Square Inch Shown on the Plans.	U. S. Gallons Water per Sack (94 lbs.) of Cement
3,000	6
2,500	6¾
2,000	7½
1,500	8¾

These water-cement ratios are the maximum permissible. The mixes shall be proportioned for somewhat lower ratios so that with the normal fluctuations from batch-to-batch these ratios will not be exceeded. Moisture held by the aggregate must be included in computing the water-cement ratios. Water absorbed by the aggregate in a period of 30 minutes may be deducted in computing the water-cement ratio.

The water-cement ratio specified shall not be changed except by the engineer. In the event that the engineer finds it necessary to change the water-cement ratios from those specified, adjustment covering amount of cement and aggregates affected will be made as an extra or a credit under the provisions of the contract.

### Measuring Moisture in the Aggregate

Moisture in the aggregate shall be measured by a method satisfactory to the engineer, which will give results within 1 pound for each 100 pounds of aggregate.

### Concrete Proportions and Consistency

The proportions of aggregate to cement for concrete of the water-cement ratios specified shall be such as to produce concrete that can be puddled readily into the corners and angles of the form and around the reinforcement without excessive spading and without segregation or undue

accumulation of water or laitance on the surface. In no case shall concrete be placed which shows a slump outside of the following limits:

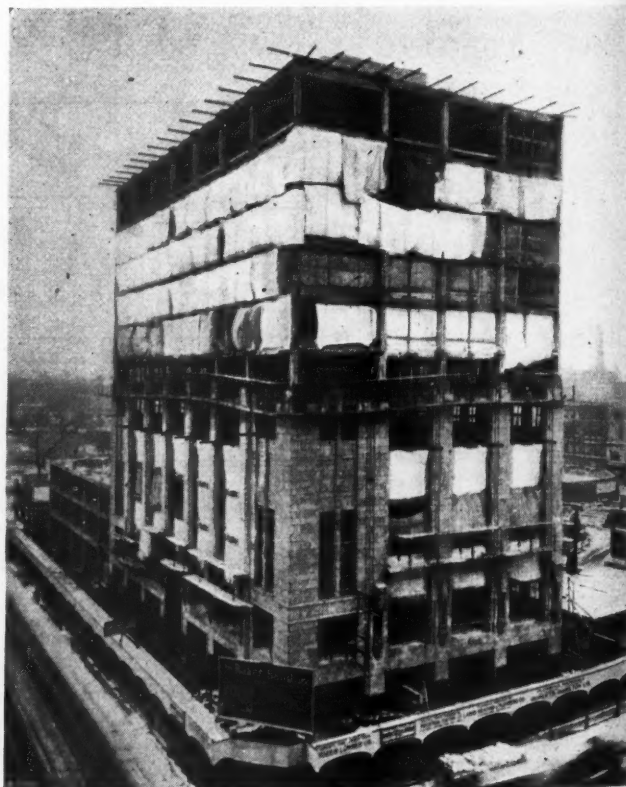
### Part of Structure

Part of Structure:	Slump—Inches	
	Minimum	Maximum
Caissons .....	1	4
Heavy walls, slabs, beams.....	3	7
Thin walls and columns.....	4	8

The proportion of fine and coarse aggregate shall be such that the ratio of the coarse to the fine shall not be less than —\* nor more than —\* nor shall the amount of coarse material be such as to produce harshness in placing or honeycombing in the structure. When forms are removed, the surface and corners of the members shall be smooth and sound throughout.

\*The following limits in the proportion of coarse to fine aggregate are suggested:

Maximum Size of Coarse Aggregate Inches	Ratio of Coarse to Fine Aggregate on Basis of Dry and Rodded Volumes	
	Minimum	Maximum
¾	0.4	0.8
¾	0.6	1.5
1 and over	1.0	2.0



It Has Been Found That Concrete Can Be Poured, with Proper Safeguards Against Freezing, Nearly as Cheaply in Winter as in Summer and, by Avoiding the Old Seasonal Slump, Winter Building Pays.

# Cement Ratio

by the Portland Cement Association for  
Strength of Concrete



In Buildings of This Sort the Water-Cement Ratio Method of Mixing Concrete Has Superseded the Less Scientific Methods of a Few Years Ago with the Result of Stronger, More Uniform Concrete.

## Control of Proportions

The methods of measuring materials shall be such that the proportion of water to cement can be closely controlled during the progress of the work and easily checked at any time by the engineer or his representative.

To avoid unnecessary or haphazard changes in consistency, the aggregates shall be obtained from a source which will insure uniform quality and grading during any single day's operation, and they shall be delivered to the work and handled in such a manner that variations in moisture content will not interfere with the steady production of concrete of a reasonable degree of uniformity.

## Tests of Concrete

Frequent tests may be made by the engineer throughout the work to determine the quality of concrete. These tests will be made at the expense of the owner, and will, in general, be made on 6 by 12-inch concrete cylinders loaded in compression at seven and 28 days, in accordance with the Standard Method of Making and Storing Specimens of Concrete in the Field (Serial Designation: C31-21) of the American Society for Testing Materials.

The contractor shall co-operate in every way to the end that concrete of the desired quality be obtained. He shall provide, at cost, such housing as may be required

for testing equipment and storage of test specimens; such cost to include only labor and materials actually used.

## Portland Cement

Portland cement shall conform to the Standard Specifications and Tests for Portland Cement of the American Society for Testing Materials (Serial Designation: C9-26).

## Fine Aggregates

Fine aggregate shall consist of natural sand having clean, hard, strong, durable, uncoated grains, free from injurious amounts of dust, lumps, soft or flaky particles, shale, alkali, organic matter, loam, or other deleterious substances. The sand shall be of such sizes that it shall pass a  $\frac{3}{8}$ -inch sieve, at least 15 per cent shall be retained on the No. 8 sieve, and the fineness modulus shall not exceed 3.20.

## Coarse Aggregate

Coarse aggregate shall consist of gravel, crushed stone, crushed air-cooled blast-furnace slag weighing not less than 70 pounds per cubic foot or other approved inert materials, having clean, hard, strong, durable, uncoated particles free from injurious amounts of soft, friable, thin elongated or laminated pieces, alkali, organic or other deleterious matter. Coarse aggregate shall not have more than 10 per cent finer than the No. 4 sieve and the maximum size shall not exceed —.

## Storage of Aggregates

Aggregates shall be stored so as to avoid inclusion of foreign materials. Frozen aggregate or aggregate containing lumps of frozen materials shall be thawed before using.

## Water

Water for concrete shall be from the city water supply or other approved source.

## Mixing Concrete

The concrete shall be thoroughly mixed in a batch mixer of approved type. The mixer shall be equipped with suitable charging hopper. A water-storage and water-measuring device shall be provided. The mixing of each batch shall continue for at least one minute after all the materials are in the mixer during which time the mixer shall rotate at a peripheral speed of approximately 200 feet per minute.

(Continued to page 210)



# What Is the Effect?

## *of the Quantity Survey System on the Business of the Contractor?*

By Oscar Euphrat

*President of the American Institute of Quantity Surveyors*

**T**HERE are probably not many architects or contractors today, especially in the larger cities, who are not familiar with the quantity system. Most architects and many contractors are in sympathy with the movement, although there are still some who oppose it.

Briefly, the theory underlying the system is, that the owner furnish the bidder a list, or survey, of quantities required for any construction operation based on plans and specifications prepared by his architect or engineer. Any variation from this survey developing during construction, whether it be addition or omission, is subject to adjustment under the agreed terms of contract.

It will be seen that instead of the numerous quantity surveys made by general and sub-contractors there will be only one, that made at the owner's expense and used by all bidders. The saving in money will be at once apparent and is conservatively estimated at from three to five per cent of the total cost of the operation.

This saving is shared by all concerned, owner, architect and contractor, and because the saving to the contractor is direct and more apparent to him than to the others, it is natural that he should be the first to attempt to apply it. Incidentally, it is a significant fact that it was through the contractor that the system was established in England, where it is the universal construction procedure.

The recommendation, therefore, of the Associated General Contractors and the National Association of Builders' Exchanges that their respective constituent bodies organize quantity survey bureaus is evidence of the contractor's thought in the matter and his conception of the best method of approach.

The contractor who today opposes the introduction of the quantity system usually gives as the reason his opinion that competition would increase, that there would be more bidders on each job, and that many men would enter the construction business who otherwise would hesitate, or even be deterred entirely. Of course, our contractor believes these things would happen simply because the owner made and furnished a quantity survey instead of having each contractor make his own, and assumes that his competitor is incapable of making one or hiring some one to do it for him.

We believe this contractor's fears are unfounded and in answer would invite him to consider what his position is today in relation to his competitor and to his customer.

Every bid he makes has in it three elements of competition: Quantity, quality and price. The first is intangible



Oscar Euphrat, Who Explains Here Just How the Contractor Would Profit by the Adoption of the Quantity Survey System.

to the customer, unknown, but real; the second more tangible than the first, although obscure in the customer's mind; and the third, a real and important consideration. Let us suggest here that our contractor bear constantly in mind that under the quantity system competition in quantity is entirely eliminated, and when competition is limited to quality and price in the construction business, as in any other business, it will reflect to the benefit of the high class contractor with his efficient organization.

To illustrate, suppose our contractor is in the concrete business and on any given operation figures 1,000 cubic yards of concrete at \$30.00 per yard and his competitor figures 900 cubic yards at \$27.00 per yard. Here is a spread between bids of about 20 per cent and we submit that our contractor would find it difficult to sell the job at his price on the basis of quality, and convince the owner that there could be such

a difference in quality. Under the quantity system, on the other hand, all bidders would figure 1,000 cubic yards and the spread between the bids would be considerably less and a sales talk by our contractor, again based on quality, would at least sound more plausible, and might even become convincing as the spread between bids becomes less.

Our illustration shows the low bidder to be 10 per cent low, both in quantity and price. Our contractor from his experience can visualize an endless variety of similar combinations, but let us suggest only one. Suppose in our illustration the low bidder is 10 per cent low in quantity and one per cent high in price and let our contractor see the difference in his position under the present system and under the quantity system.

Whether our contractor, instead of being in the concrete business, is in the lumber, steel, stone, plumbing or any other line of construction work makes no difference.

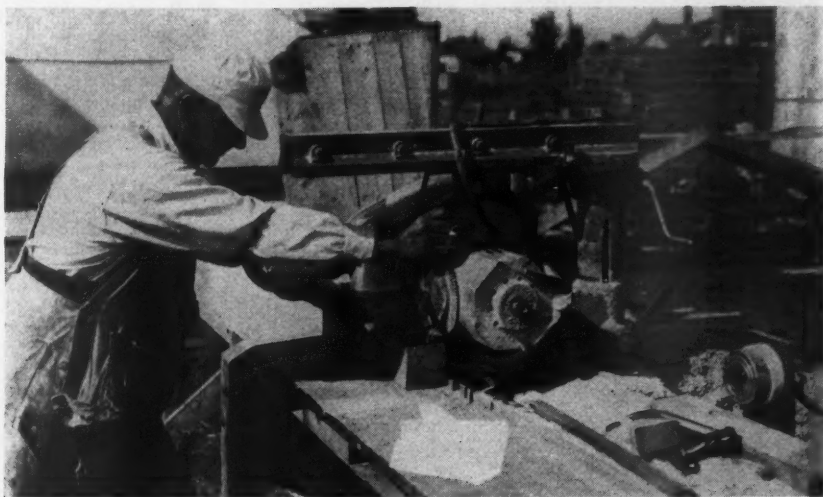
Another illustration: Suppose our contractor is a general contractor who confidently bids on and executes contracts in the neighborhood of \$500,000 and let us say for convenience he is in the \$500,000 class.

He may at one time have been in the \$50,000 class and hopes perhaps some time to be in the \$3,000,000 class. What keeps him out of the three million dollar class today? Is it his inability to make a quantity survey on such a job, or is it something else? We are sure he will agree that it is something else. Now change the \$500,000 to \$15,000 and the other figures in proportion and you haven't changed the situation in the least. Now change the general contractor to a sub-contractor and the situation is still the same.

(Continued to page 91)

# The Economy of the Power Saw

## Is Proved in Actual Construction Work



A Power Saw in Use on the Construction of a \$200,000 High School in Calgary, Canada, by the Bennett & White Co., Ltd., One of the Contracting Companies Which Contributed Data Used in This Article.

ONE of the manufacturers of power sawing equipment has been gathering data, from actual construction jobs, to find out exactly what is accomplished by the use of its saw. The experiences and figures given here are a few selected from the facts obtained by this company and prove, beyond question of doubt, that the use of well selected equipment means economy and hence greater profits for the builder.

From 50 to 60 per cent of all carpenter work, in residence construction has been done, in the past, with the hand saw. This company's saw, used to capacity, cutting continuously, will keep from 12 to 15 men busy nailing up. In the average residence construction, between 10 and 15 per cent of the selling price of a house represents carpenter labor costs. In a house selling for \$5,000.00, this would make the carpenter labor cost about \$500.00. Through the use of this saw the builder should save at least 20 per cent of his carpenter labor cost or \$100.00 on every \$5,000.00 house.

In addition to this, such a saw saves material. Short length lumber is usually cheaper than long length lumber. Often second grade lumber can be used where there is a suitable saw for cutting first grade material out of the second grade material. Short ends, odds and ends, all the lumber on the job can be utilized when there is a power saw to shape it quickly and cheaply.



Here Dawson Bros., Ardmore, Pa., Contractors, Are Using a Power Saw to Turn Out 200,000 Feet of Lumber on an Apartment Job.

In accuracy alone the use of such a saw means quicker fitting and a better job. Where ends of material are cut square they will set square and the house will not settle later because of poor fitting. All this means that the builder using ample power sawing equipment will save on labor, he will save on material, he will do better work, he will do more work and make larger profits.

These are the conclusions from the data received from contractors who are actually using this equipment out on the job. Some examples of what these contractors state will show how these conclusions have been reached. For example:

W. H. Eberhardt, of Dallas, Texas, says that on one job he saved \$300.00 worth of labor and materials. "Seventy-five to 80 per cent of all my sawing for building residences and apartment houses is done on this power saw. It does all my studs, roofs, bridging, trimmers, headers, storm sheathing and shiplap between the openings. Selecting all my window jambs from No. 2 material, I have then sized, straightened, ploughed, dadoed and mortised for pulleys and a put a backbone mould on my casing and base. I have made all my cabinet doors, panel doors, glass doors and screens; cut out and nosed stair treads; routed out the stringers; rabbetted my door jambs and sized them. Besides this the machine cuts hundreds of blocks that go into every good sized building."

The Nason Construction Co., of Swampscott, Mass., states that it saves five men's labor by using this machine and advances the completion of each job by 25 per cent from what it would be without such equipment. In cutting rafters, Mr. Gordon, of Yeadon, Pa., with the assistance of a laborer, cut 85, two by six by 16 rafters, three cuts to each rafter, one miter cut for the peak and two plumb cuts, in 35 minutes. Mr. McMacklin, of Bryn Mawr, Pa., dadoed 600 base, for eight rooms, in three hours. This was dadoing on both ends.

In framing a seven-room, stuccoed residence, J. A. Quackenbush, of Buttonwood, N. J., states that two men put up the entire framing, including the gable studs, in 6½ hours. This was made possible by first laying out all his cuts on his plans and numbering them before proceeding with the cutting. While this required two days' planning he saved several days' carpenter labor and he figured his lumber so closely that he had hardly any waste.

(Continued to page 89)



# Architectural Beauty in the Modern Warehouse



A Warehouse Designed with the Thought That It Should be not Only Convenient and Firesafe, but Also in Keeping with the Architectural Scheme of the Neighborhood in Which It Is Located Is a Real and Permanent Addition to the Community.

**I**N keeping with the pronounced present day trend toward more beautiful warehouses, the new \$350,000 warehouse, which Coakley Brothers recently put into operation in the heart of one of the most exclusive residential and outlying business districts in Milwaukee, is a monument of architectural beauty and utility.

Located at the corner of North Avenue and Prospect Street, two heavily traveled arterial highways, the advertising value of this site is without doubt one of the best in Milwaukee. In view of the fact that a warehouseman has no commodity to sell and cannot make a window display as in the case of the merchant, it is highly important that his warehouse be as attractive as possible and prominently situated. This was the thought that prompted Coakley Brothers to select this site for their new warehouse, and in their instructions to the architect, George S. Kingsley, of New York, a specialist in warehouse construction.

"We decided on this location for our new warehouse," said C. H. Coakley, president of the Coakley Brothers Company, "because we saw the need of a modern warehouse conveniently situated in this section of the city, which is populated by a class of people who frequently make use of storage facilities such as our new warehouse affords.

"We realized, too, in selecting this site, that we would have to build a warehouse that would not only be a source of convenience, but that would likewise be in keeping with the beauty of the neighborhood. So in making our plans for the new building we secured the services of George Kingsley, New York, architect, who specializes in the design and construction of warehouses, and instructed him

to go the limit to make the warehouse fit in with the architectural scheme of the neighborhood."

The Coakley warehouse, which is one of the outstanding buildings in Milwaukee, embodies every feature contained in the very best warehouses in the United States. In addition to being a convenience to the residents of the section in which it stands, the new structure harmonizes perfectly with the architectural scheme of the neighborhood.

The building is six stories high and the exterior is a facing of white glazed terra-cotta, which is an everlasting surface that is not affected by dirt or smoke and can be kept clean with soap and water. The clock tower with its three dials, each of which is eight feet in diameter, is the crowning feature of the exterior and will draw attention to the building as no other feature could. The name "Coakley Bros." in bold letters supplants the numerical figures on the dials of the clock tower, and can be seen for a great distance not only during the day, but at night as well when the tower is illuminated from within.

In designing the exterior of the building the interior arrangement and construction of the building was in no way sacrificed, or the efficiency of the warehouse interfered with. In fact, every available foot of storage space is utilized to the very best advantage. The building has a total storage space of 58,000 square feet. All the requirements of the National Board of Fire Underwriters have been fully met in the construction, and the building is fireproof from clock tower to basement. This feature enables Coakley Brothers to offer the lowest insurance rates on household goods in America.

The skeleton type flat slab system of reinforced concrete was used, with 12-inch brick enclosing walls faced with impervious pressed brick laid in water proofed mortar to insure against dampness. The roof is insulated against frost and heat and a specification roof covers the entire building. All the floors in the building are painted so as to eliminate the accumulation of dust. The entire building is heated with a vapor vacuum system of steam heat.

Modern facilities are available for the storage of household goods, furniture, pianos, automobiles and silverware. The various upper floors are divided into small fireproof compartments for the storage of household goods, each room being equipped with a steel door bearing the underwriters' label. There is also a large space on the top floor given over to open storage purposes.

Fire and burglar proof rug and trunk vaults, with reinforced concrete walls, vault doors and enameled iron racks, are located on the second floor. The racks are adjustable for the accommodation of rugs and trunks of various sizes. The rug vault is 30 by 30 feet and has a capacity for the storage of more than 500 rugs, the trunk vault is 20 by 30 feet and will hold 500 trunks. A large piano room, which is kept at an even temperature throughout the year, is also located on the second floor and is especially designed for the storage of fine pianos. Nearly 500 pianos can be stored in this section.

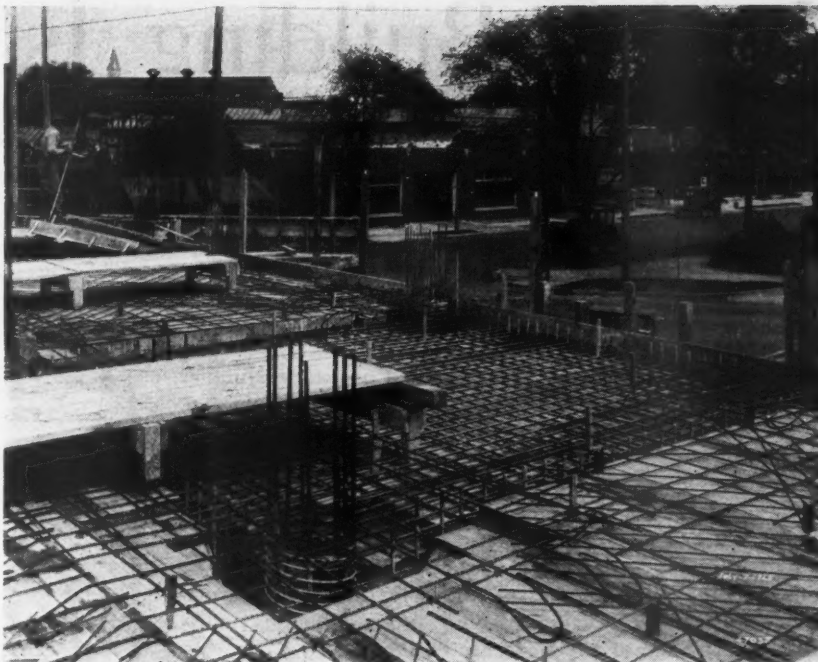
The main floor of the warehouse is arranged for administrative purposes and the shipping department. The general office is conveniently located in the front portion of the first floor and is entered through an attractive vestibule. The walls of the office are of imported Caen stone, and the floors are of art metal. The counter in the office is of Belgian black marble.

The lighting effects are unique, being of the indirect type, which is the nearest artificial light to daylight. A virtually impregnable silver vault, the only one to be found in any Milwaukee warehouse, is located in the office. A massive vault door of heavy four inch steel, a steel day gate and an inner door of similar material separates the vault from the office. The interior of the silver vault is lined with enamelled iron racks.

The shipping department with the loading platform, van room, and freight elevator is located in the rear of the first floor and adjacent to the general office. The moving vans enter directly into the building so that all loading and unloading of household furniture is done under cover. The three large rolling doors at the entrance of the shipping room are electrically operated which means a saving in time and loss of heat.

In addition to the warehouse office the first floor is occupied by the offices and display rooms of the Marmon and Studebaker automobile companies, and the office of the Green Insurance Agency. These attractive offices and display rooms, which face an North and Prospect, respectively, greatly enhance the appearance of the main floor of the building, and provide a valuable source of revenue to Coakley Brothers.

The basement is devoted to boiler and coal rooms, and to the packing room in which furniture is crated for shipment to other cities or for storage. Besides this a portion of the basement is reserved for the storage of



Heavily Reinforced Concrete Was Used, Not Only in the Construction of a Practically Impregnable Silver Vault, but Also Throughout the Building.

automobiles. Automobiles can be stored in this room for any period of time at a rate cheaper than the average storage rate. There is room for the storage of more than 50 automobiles.

In addition to the large freight elevator a push button passenger elevator operates from the office to every story. Wis. T. N. B.



## Economy of the Power Saw

(Continued to page 87)

In cutting sheathing, John Mercadante, of Chester, Pa., kept six men nailing  $\frac{7}{8}$  by 12-inch roof sheathing, on 18 houses. He also cut 206, two by four studs per hour on these houses and kept eight men nailing. Wm. P. Jones, a carpenter and builder of Dover, N. J., states that he is certain his machine paid for itself on one three-story brick job he is just completing. Mr. Burleigh, of Sharon Hill, Pa., cut the jack rafters for two brick houses in two hours, a job which would ordinarily require a full day and the cuts would not be as accurate.

Mr. Adrien, a builder in Philadelphia, states that his machine is worth five men to him with the decided advantage that, when the work on hand is completed, it is not necessary to find something else for that many men to do or lay them off. All he has to do is to turn off the current. He has come to the place where he will not start a job unless he has two machines right with him. He says he would rather hold up a job for a day or two than start without the machines.

In cutting studding, Geo. J. Gehring, Drexel Hill, Pa., cut and squared 4,000 two by four studs in one day, for a 16-house development. In cutting stair horses, Whittaker Bros., of Merchantville, Pa., cut a pair with 13 risers out of two-inch plank, in 20 minutes. Chas. P. Witsil, Wilmington, Del., cut four pairs of stair horses while a man with a hand saw was cutting one pair. In cutting studding one man with a machine kept 12 men nailing.

And so it goes through a long list of statements made by contractors who are actually using this sort of equipment on all kinds of construction work.



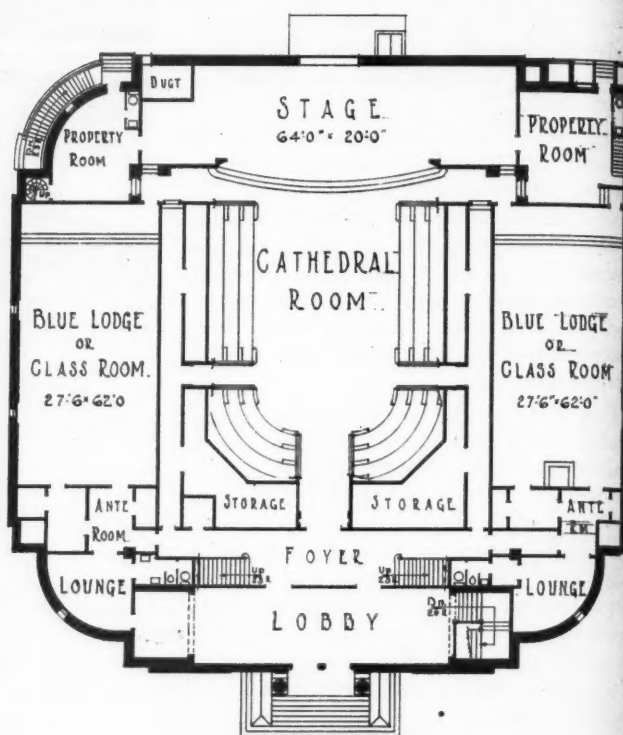
# Lodge Building Is Impressive Architectural Achievement

William N. Bowman & Co.,  
*Architects*

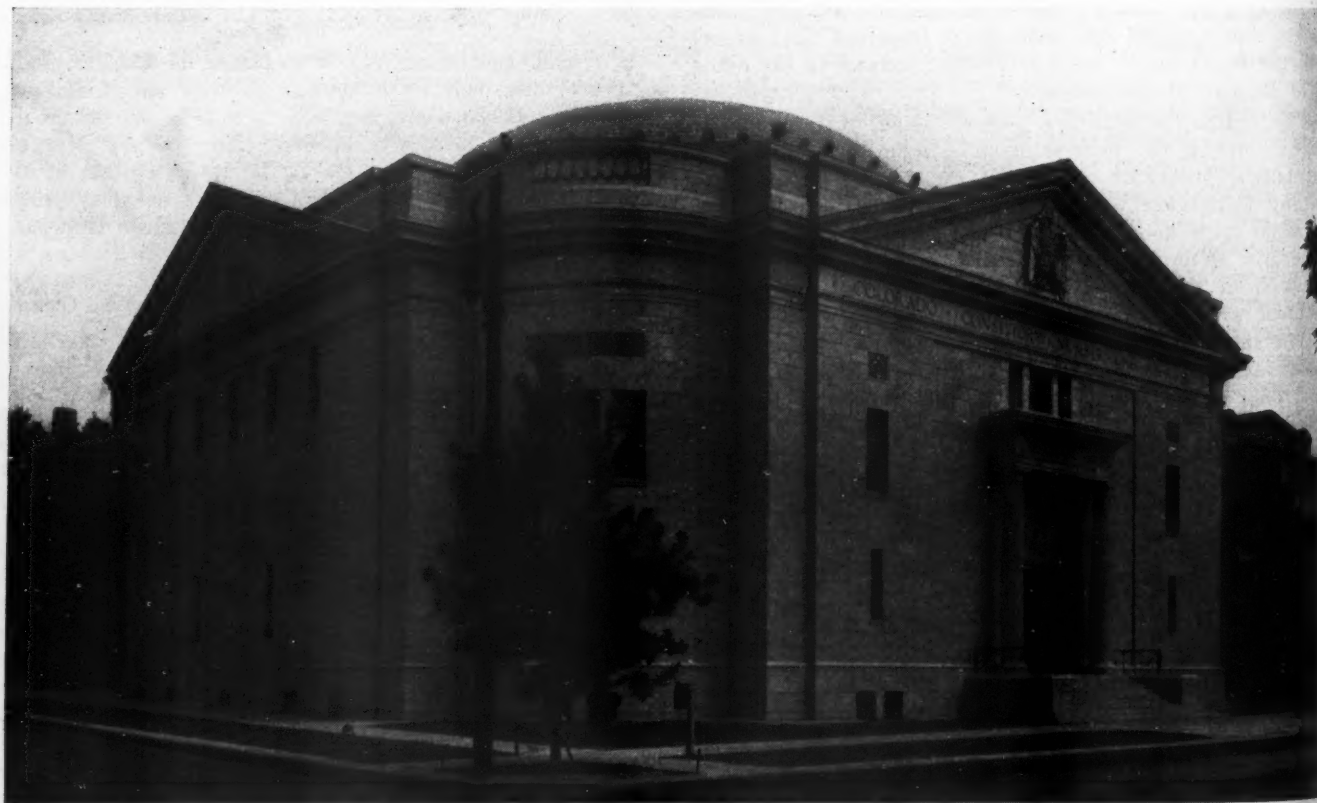
**T**HE new home of the Colorado Consistory Number One, A. & A. S. R., located in Denver, Colorado, sets a standard which may well be taken as a model by those who are planning buildings of a similar nature. The design of such a building should be such that it will become a permanent ornament to the community and will maintain its beauty for many years after attraction of newness has disappeared. Such qualifications are well met by this building which possesses not only the air of permanence but a particularly satisfying effect which is indisputable evidence of excellence in design.

The building is of solid masonry worked along lines that suggest massive strength but a delicacy of detail precludes any heaviness or severity in spite of this and the strictly limited ornamentation. It is a square structure except for the corners which are cut away in rounded bays. The roof forms a graceful dome above the Cathedral Room which occupies most of the interior above the basement floor. The exterior is distinctly classic and the entrance is flanked by columns in the pure Greek style.

From the entrance the visitor enters a lobby from which he may either pass on into the foyer of the Cathedral Room or down a flight of steps to the basement where is found a large room used both as a dining room and ball room. Spaced about this large hall are the requisite coat rooms



Main Floor Plan Showing the Floor Level of the Cathedral Room with the Blue Lodges, at the Sides, Under the Upper Tiers of Seats.

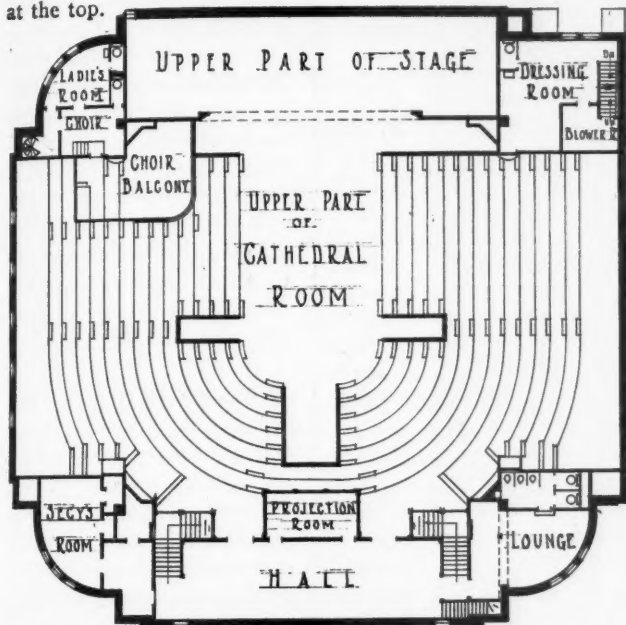


The New Home of Colorado Consistory Number One, A. & A. S. R., Denver, Colorado, Was Designed by William N. Bowman & Co., Architects, of Denver, and Represents the Type of Building Which Is a Permanent Addition to the Beauty and Dignity of the Community.

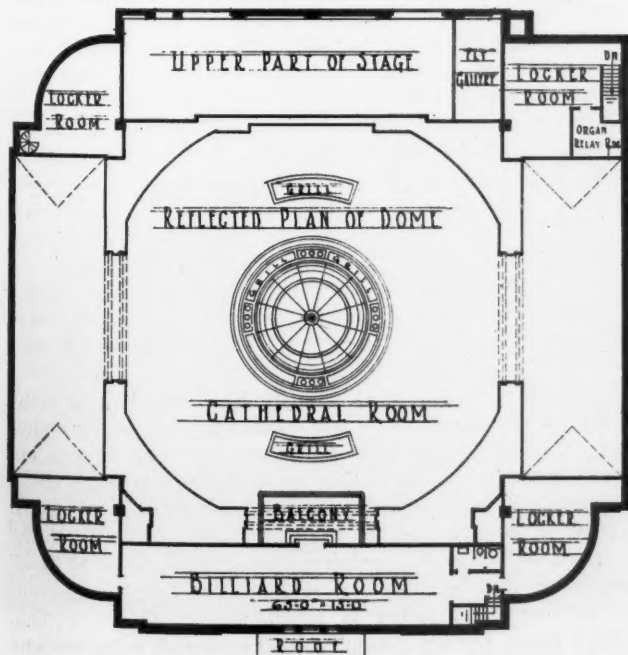
and similar accessories including the kitchen while at the rear are the boiler, coal, fan and boiler rooms and storage space.

On the main floor there is a lobby at the front entrance with a foyer leading into the Cathedral Room back of it and with lounges and anterooms at either side. The remainder of the space is occupied by the Cathedral Room and stage with a Blue Lodge or Class Room at each side, beneath the upper tiers of seats. These upper tier seats begin at the level of another floor which, at the front of the building is completed and contains a hall, secretary's room, lounge, projection room and, at the rear corners a dressing room, ladies' room and choir balcony.

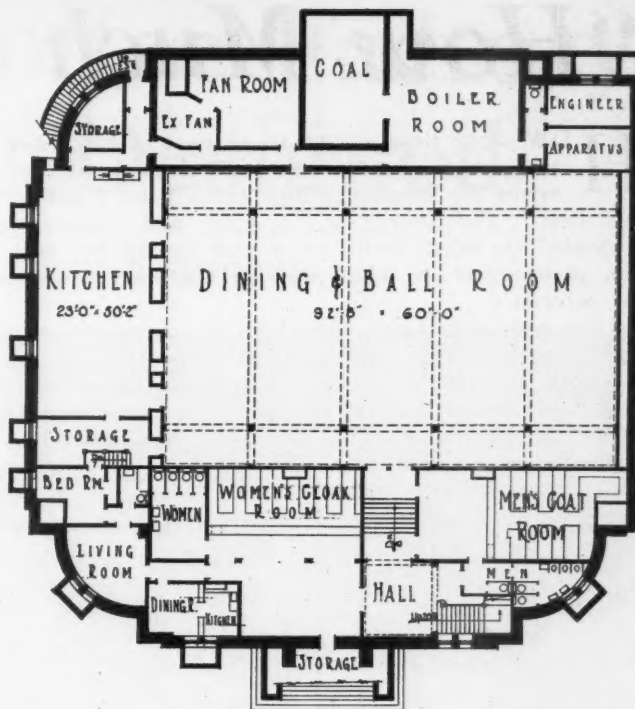
Still above this there is another floor level containing at the front a billiard room and locker rooms and at the rear corners additional locker rooms. The dome of the Cathedral Room extends upward in the center, the entire height of the building, to the domed roof, and contains a grille at the top.



This Plan Shows the Upper Portion of the Cathedral Room and a Gallery Floor at What Would Be a Second Floor Level, at the Ceiling Level of the Blue Lodges



At What Would Be Called a Third Floor Level, Is a Second Gallery Floor Providing for a Billiard Room and Locker Rooms in the Corners of the Building.



The Basement of This Building Contains, in Addition to the Heating Equipment, a Combination Dining and Ball Room and the Accompanying Coat Rooms.

## Quantity Survey System

(Continued to page 86)

Our contractor has in his employ quantity surveyors, superintendents and foremen, all of them necessarily capable of reading and taking quantities off plans. One or more of these or a combination of them may or may not go into the construction business some day. What keeps them out of the business today?

Is it their inability to make a quantity survey or is it something else? We think it is something else such as initiative, capital, business training, etc.

If we are correct in the assumptions we have made, how, then, will competition be increased?

Our contractor knows that he himself would not figure jobs above or out of his class simply because he is furnished a quantity survey, but believes, however, that every other contractor would do so, which, of course, is not logical. Again, if there are to be more bidders on any job they must be invited by owner or architect and there are those who will say "that's impossible."

Now, it is possible that the careless, reckless fellow will bid more and larger jobs than he can handle properly, but isn't that exactly what he is doing today? Isn't he the fellow who causes much of the grief in the business, and would he not be less harmful if he were never too low in quantity?

Suppose, for the sake of argument, we assume (we do not admit) that there would be 10 bidders where there are now two. Under the present system, one of the two bidders, or both, might be too low in quantity or out of 10 bidders one or 10 might be too low in quantity; whereas under the quantity system none could be too low in quantity or too high either for that matter and competition in quantity would cease.

With only two bidders there might easily be a difference of 20 per cent between high and low bid, on account of difference in quantity when both bidders are using the same unit price. With 10 bidders all using the same quantity there would have to be a difference of 20 per cent between high and low bidder to create a similar condition.



# "How Much Must I Get?"

**H**OW many times do we all sit back in our chairs, run our fingers through our hair and ask ourselves the question, "How much must I get for this job?" The answer is, "A great deal more than I should." In other words, every time we put this question to ourselves we admit that we are guessing as to the outcome.

I am willing to admit that there are certain types of jobs which are pretty hard to figure successfully, so that we must, at times, do a little tall guessing. Under such conditions the question is excusable but not otherwise. If we analyze our estimate; know the conditions under which the work must be done; know our overhead and how much profit we desire to make on the job, there should be no question as to the price to be asked.

Every estimate resolves itself into five main items:

1. Cost of material.
2. Cost of labor.
3. Sub-contractors.
4. Overhead.
5. Profit.

Now the cost of material is an easy one to handle as it requires merely the mechanical knowledge required to list off the materials which will be needed on the work. After the bill of material is made up it is a simple operation to put in the prices or obtain a bid from the material dealers.

The cost of labor is a real problem as it is a tough proposition to figure how much work a mechanic will do under the conditions which exist today, but if a proper system of cost cards, or records, has been kept it is a fairly easy operation to obtain an average labor cost for the various items of work. Of course the actual labor costs must be adjusted to the conditions surrounding the work in hand, but with an average cost to start with this adjustment should not be difficult. The old "system" of using a percentage of the cost of material as the cost of labor is only a haphazard guess at best, so that our labor records, and estimate, should show items for framing; porchwork; cornice work; doors; windows; base; finish floors; cabinet work; roofing, etc., etc. Do not be afraid to sub-divide your labor items too much, the more the better.

The item of sub-contracts needs little explanation as it merely requires that all sub-contracts be listed up with the price on each. A small percentage is then added for our trouble in handling the accounts. The only precaution necessary is to be sure that everything is included and that no two contractors have included the same items in their bids.

A real question arises with the subject of "Overhead." This item is either ignored altogether or guessed at more than all other items combined. There are probably not more than 10 per cent of the small building and jobbing contractors who know what the item includes or what it really stands for, so in order to clarify the item we

will consider the approximate overhead of the smaller contractor with his own little mill. Of course the figures are purely arbitrary and each contractor must fill in his own amounts in order to arrive at his own overhead expense.

From the schedule we see that the business must bring in the sum of \$1,330.00 per month before there can be any thought of profit. Now, in order to put each job's share of the overhead where it belongs, we must know approximately how much is done each month on an average, this business to be based on the prime cost of the work without adding overhead or profit.

Now, if our yearly business is estimated at \$100,000.00

it means that our average monthly business amounts to \$8,333.00, to which must be added 16 per cent for overhead—in other words, we add 16 per cent to all estimates to care for the item of overhead. The percentage to be added to the prime cost is obtained by dividing the amount of the monthly overhead by the volume of monthly business or, in this case, by dividing \$1,330.00 by \$8,333.00. Of course if the volume of business is larger the percentage of overhead is smaller, while if the amount of business is smaller the percentage of overhead is larger.

Our prime cost of \$8,333.00 per month plus 16 per cent overhead now

becomes a cost of \$9,666.00 and whatever sum we have over this last amount is profit. Now, as all of our expense has been included in our items of overhead expense our rate or percentage of profit should mean a clear earning and consequently should not be excessive—say about 10 per cent, so that our month's business would look like this:

Prime cost of labor and material.....\$ 8,333.00  
Overhead, 16 per cent of prime cost..... 1,330.00  
Profit, 10 per cent of prime cost plus overhead.... 966.00

Total monthly business.....\$10,629.00

The item of profit and loss has not been seriously considered here as with consistent figuring the excess profit on a few jobs should more than care for the small losses which may occur on a few others so that the 10 per cent profit will average through.

From these figures it can be readily seen why so many of the smaller contractors work their hearts out year after year and have nothing to show for their year's work but a few gray hairs. It makes no difference how small an organization is it simply must have some overhead, it cannot be dodged, and if an item of 10 per cent "profit" is added to his prime cost it is not making a profit at all and, more than likely, is not even making overhead and, as his volume of business is small, his overhead is high. I have never known a small contractor of this kind whose overhead did not run at least 10 per cent, although many of them have tried to convince me that they simply did not have any overhead.

GEORGE M. PETERSON

## Schedule of Overhead Expense Items That Must be Figured into Costs

1. Rent, or interest on investment if property is owned .....	\$100.00
2. Light and power.....	20.00
3. Heat .....	5.00
4. Telephone .....	15.00
5. Postage .....	10.00
6. Maintenance of autos and trucks.....	75.00
7. Depreciation of plant.....	40.00
8. Owner's salary.....	250.00
9. Superintendent's salary.....	250.00
10. Estimator's salary.....	200.00
11. Book-keeper's salary.....	125.00
12. Office expense, stationary, printing, equipment, etc. ....	25.00
13. Insurance fire, liability, compensation, etc.....	75.00
14. Advertising .....	100.00
15. Miscellaneous items which cannot be charged to each job.....	40.00
<b>Total monthly overhead.....</b>	<b>\$1,330.00</b>

# Cheek-Neal Coffee Factory Attractively Designed

A. Epstein, Structural Engineer

**I**N the lower left hand corner of this page is shown a perspective drawing of the Cheek-Neal Company's new factory in the Central Manufacturing District, Chicago. At the right, an airplane view of the completed building, shows its advantageous site on Pershing Road adjoining the United States Army Headquarters for the Sixth Corps Area and the Chicago Quartermaster's Depot.

The new Cheek-Neal Building is architecturally worthy of its surroundings, across the street from McKinley Park and but a short distance from Western Boulevard. This latter street has many industrial buildings of good architectural lines and fine finish, set far enough back from the boulevard for grass and flowers to furnish attractive settings.

Pershing Road itself now ranks as one of the city's most important thoroughfares, 108 feet in width, eleven miles in length and extending from Lake Michigan to the Forest Preserve.

The designer of this building has provided a design which is harmonious and pleasing and yet appropriate to the character and purposes of the struc-



Airplane View Showing the Site of the Completed Cheek-Neal Factory Building, Which Is the Smaller of the Buildings in the Foreground. Across the street is McKinley Park and adjoining the new building are the U. S. Army Commissary and headquarters of the Sixth Corps area.



Perspective Drawing Which Shows the Excellent Architectural Lines of the New Cheek-Neal Coffee Factory on Pershing Road in the Central Manufacturing District of Chicago, from Whom the Site Was Acquired. The building is six stories high and measures 110 by 140 feet, ground area.

ture. The building is 110 by 140 feet, is constructed of concrete, brick and steel and ornamented with artistic trim of terra cotta.

The facilities for service include shipping platforms from which six large trucks and three freight cars can be loaded or unloaded at the same time. An enclosed garage is built into the building on the ground floor. The interior of the building is equipped with all machinery necessary for cleaning, roasting, blending and packing the well-known brand of Maxwell House coffee. Other plants of the company are located at Nashville, Houston, Jacksonville, Richmond and Brooklyn.

The Maxwell House, of Nashville, was probably the most famous hotel of the old South, being equally famous with the old Palmer House, of Chicago, the Galt House and the Old South, of St. Louis. During the Civil war, the Maxwell House had served as hospital and barracks, commanded by General Zollerback. When first built by Mr. Overton, it was known as "Overton's Folly," because he put such a magnificent structure in such a small city.



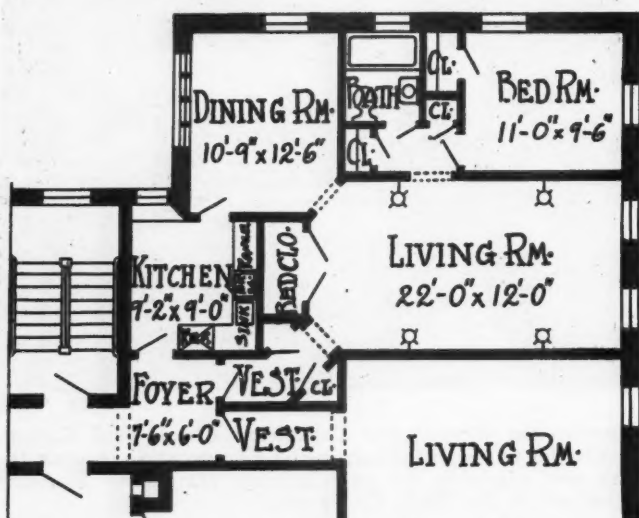
# "The Highlands"

## *A Popular Priced Co-operative Apartment*

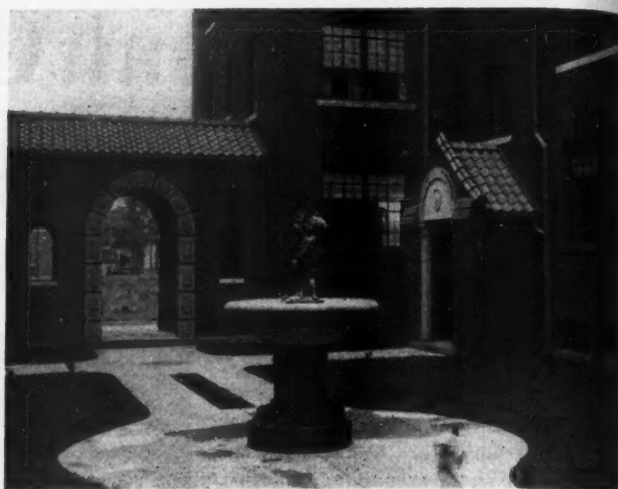
SOME distinctive features mark the construction and financing of "The Highlands," a co-operative apartment building at Highland Park, Detroit's exclusive suburb, placed on the market by the Woodward Highlands Company.

"The Highlands" was the first unit of 10 similar ones of a \$4,000,000 development, consisting of five buildings on each side of a landscaped court 42 feet wide.

Each building contains 48 four and five room apartments.



A Typical Four-Room Apartment, One of 48 Apartments in This First Unit of a 10-Unit Development.



The Entrance Court of "The Highlands" Contains a Charming Fountain.

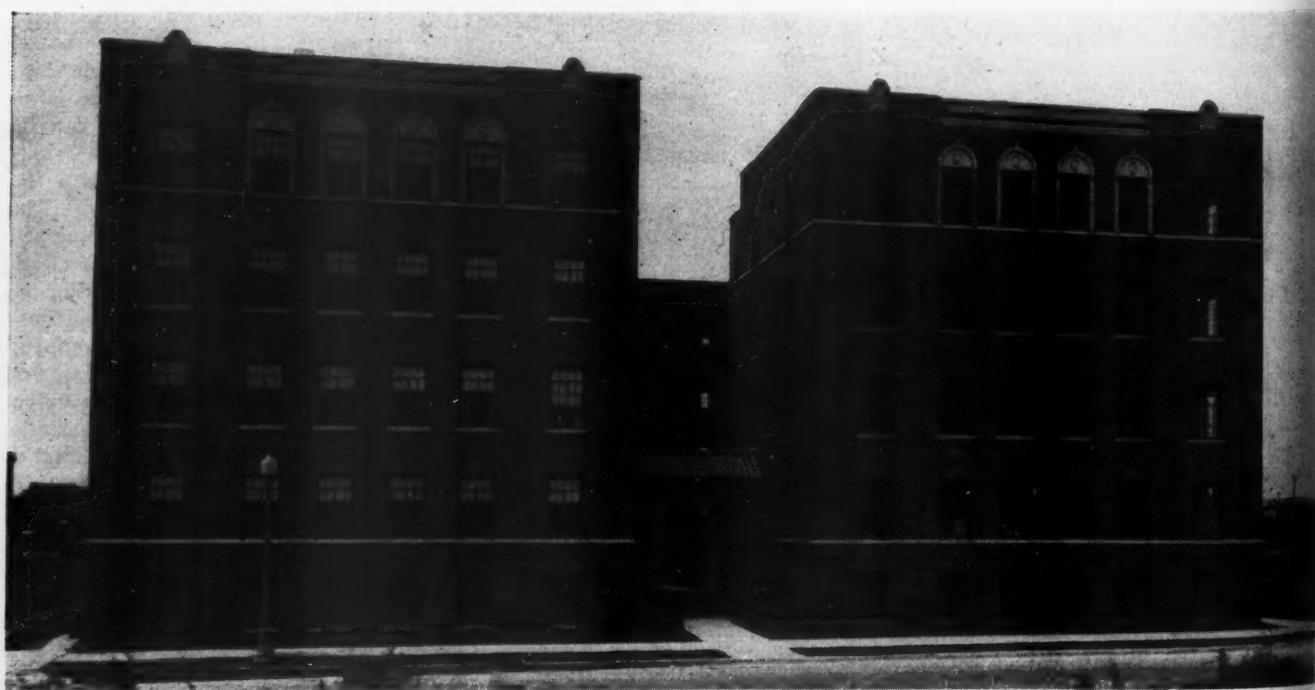
Each of four separate entrances serves but three apartments per floor or 12 in all. For each of these there is an additional service entrance and stairway at the rear, something unusual in a popular priced apartment house.

The arrangement is such that every apartment has windows on at least two sides of the building, thus providing for two great essentials, cross ventilation and sufficient light.

Other features are two large completely furnished and heated recreation rooms for the children to romp and play in during bad weather, and a beautifully decorated auditorium for adults, suitable for dancing, parties, and other social features, private storage rooms, four incinerators with chutes on each floor, and eight sets of laundry tubs in the basement, each with hot plate and individual clothes dryers. Each kitchen has a complete set of cabinets and mechanical refrigeration.

There are eight different layouts of four and five rooms each, ranging in price from \$7,400 to \$9,400. They are sold on a down payment of 15 per cent and one per cent a month. This one per cent covers the installments on the purchase price and interest, together with all operating expenses.

H. L. SPOONER

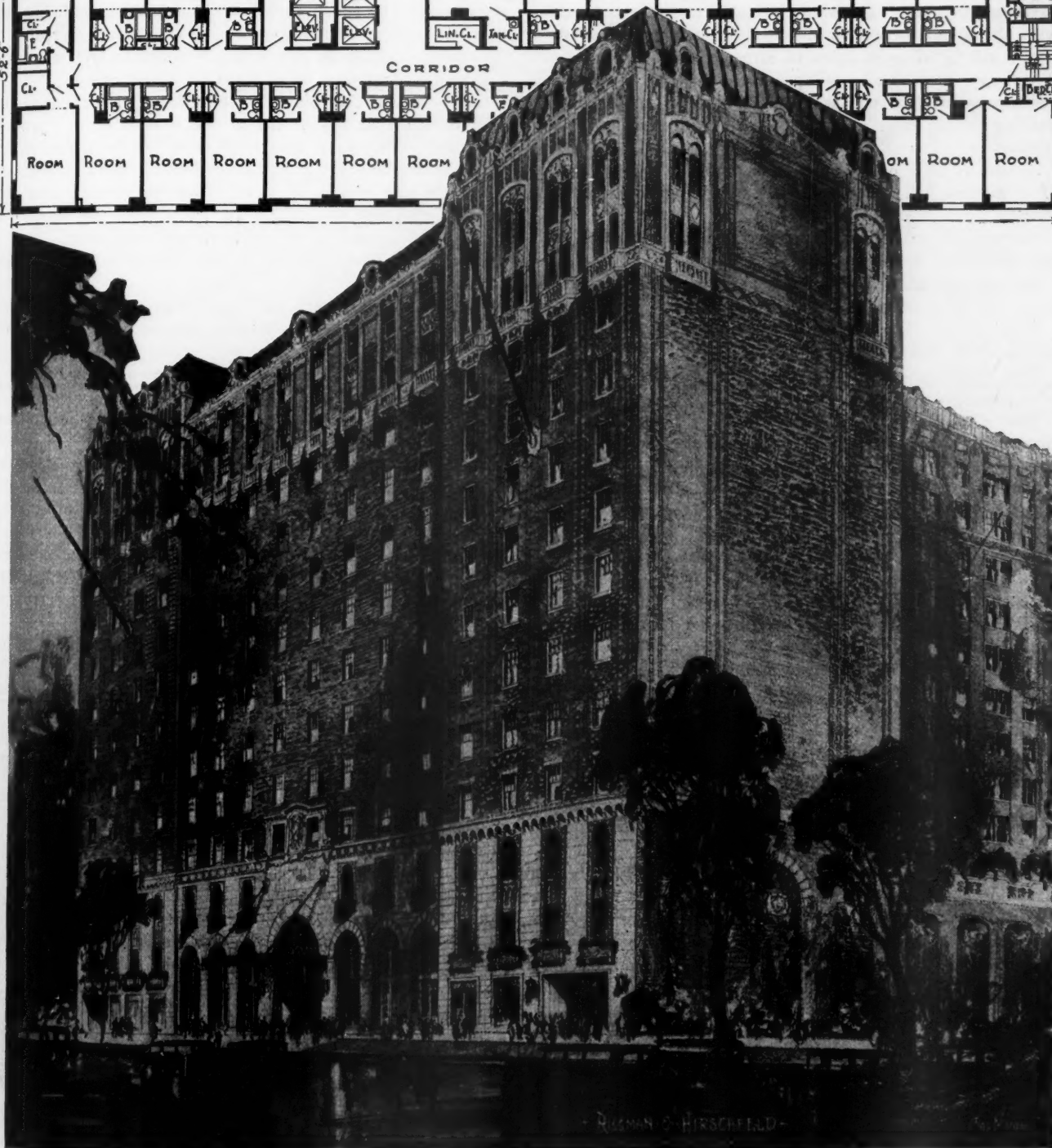
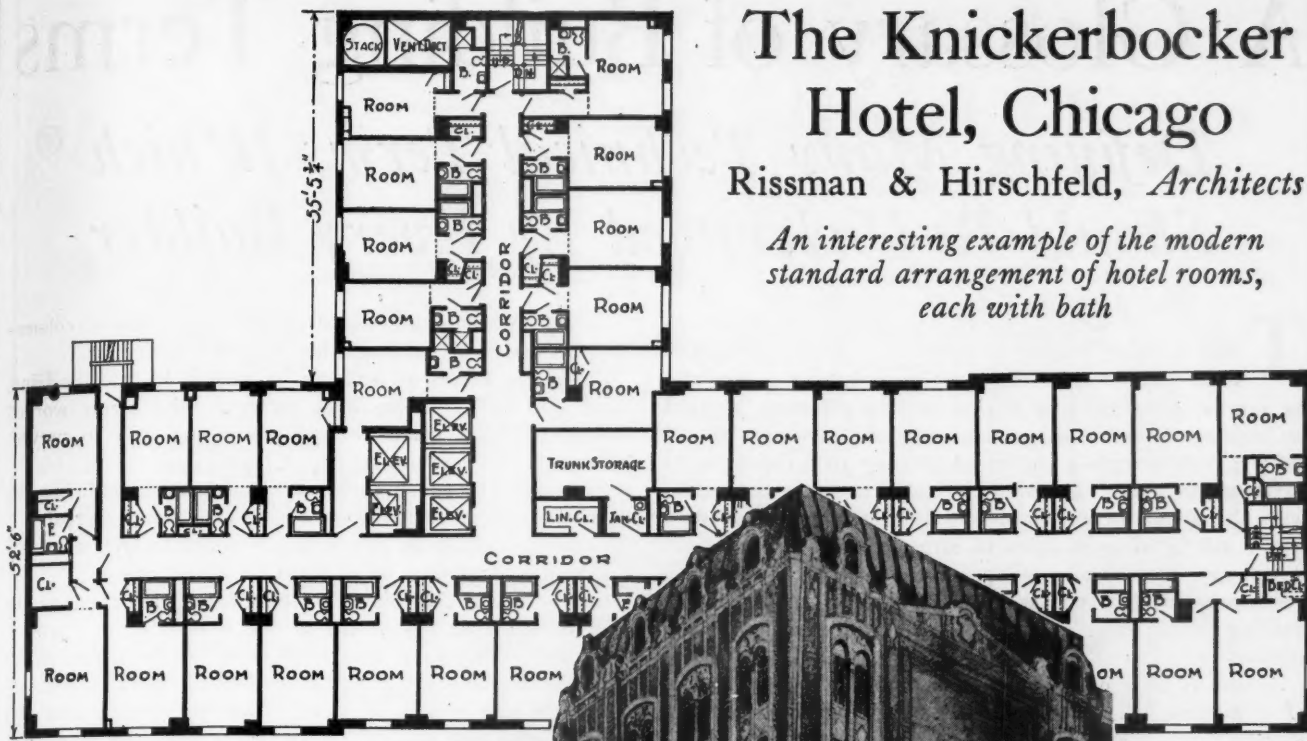


"The Highlands," Detroit, Mich., Built by the Woodward Highlands Co., Is One of 10 Similar Units, Five on Each Side of a Wide Courtyard, and Is a Popular-Priced Co-operative Development.

# The Knickerbocker Hotel, Chicago

Rissman & Hirschfeld, Architects

*An interesting example of the modern standard arrangement of hotel rooms, each with bath*



Among Residential and Transient Hotels, the Knickerbocker, at 163 E. Walton Place, Chicago, Holds High Rank.



# A Glossary of Building Terms

## *Defining Many Technical Terms Which Should Be Understood By Every Builder*

**T**HERE are many technical terms used in connection with building construction that are greatly misunderstood not only by the average homebuilder but also by a great many building mechanics. To aid those engaged in building construction in mastering the fundamentals of building terminology, a condensed glossary of building terms has been prepared. The study of these terms in connection with the accompanying drawing, showing a typical modern home, will be of great value to carpenters and builders since it will give them the knowledge of the function of the various structural units and will enable them to employ correct building terms when discussing plans with architects and contractors.

**Apron**—A plain or moulded piece of finish below the stool of a window, put on to cover the rough edge of the plastering.

**Astragal**—A small semi-circular moulding, sometimes plain and sometimes ornamented.

**Baluster**—Small spindles or columns usually forming the body part of a railing.

**Barge-Board**—The board under the verge of gables. Also called Verge Board.

**Base Moulding**—The mouldings immediately above the plinth of a wall, pillar or pedestal.

**Base**—A board running around a room next to the floor to properly finish between floor and plaster. Same as Base-board.

**Batten**—Small scantlings or small strips of boards used for various purposes. Small strips put over the joints of sheathing to keep out the weather.

**Batter**—A term used by bricklayers, carpenters, etc., to signify a wall, piece of timber or other material, which does not stand upright but inclines from you when you stand before it. When on the contrary, it leans forward, toward you, it is said to overhang.

**Beam**—A piece of timber, iron or other material, placed horizontally to support a load over an opening, or from post to post.

**Brace**—In carpentry an inclined piece of timber used in trussed partitions or in framed roofs in order to form a triangle, and thereby stiffen the framing. When a brace is used by way of support to a rafter, it is called a strut.

**Bridging**—A method of stiffening floor joists and partition studs by cutting pieces in between.

**Butt-Joint**—Where the ends of two pieces of timber or moulding butt together.

**Casement**—A glass frame which is made to open by turning on hinges affixed to its vertical edges.

**Conduit**—A channel that conveys water or fluids, a drain or sewer. In electric work, for carrying wires as a protection and for safety.

**Cornice**—The upper division of the entablature of a column, the highest projecture; that which crowns a wall.

**Dormer**—A window belonging to a room in a roof which consequently projects from it with a valley on each side.

**Eaves**—The margin or lower part of the roof hanging over the wall.

**Facade**—The whole exterior side of a building that can be seen at one view. The principal front.

**Fascia**—A flat broad member in the entablature of columns or other parts of buildings, but of small projection.

**Flashings**—Pieces of lead, tin or copper, let into the joints of a wall so as to lap over gutters. Also pieces worked around dormers, chimneys and any rising part to prevent leaking.

**Framing**—The rough timber work of a house, including the flooring, roofing, partitioning, ceiling and beams thereof.

**Furring**—Nailing on thin strips of board to level a surface for lathing, boarding, or to form an air space.

**Gain**—Cutting the joist to receive a timber, or cutting the joist to notch on top of the girder.

**Grounds**—Pieces of wood imbedded in the plastering of walls to which skirting and other joiners' work is attached. They are also used to stop the plastering around door and window openings.

**Gutter**—The channel for carrying off rain water.

**Hanging Stile**—Of a door, is that to which the hinges are fixed.

**Headers**—In carpentry, the large beam into which the common joists are framed, in framing openings, for stairs, chimneys, etc.

**Headway**—Clear space or height under an arch or over a stairway, and the like.

**Hip Roof**—A roof which rises by equally inclined planes from all four sides of the building.

**Hips**—The exterior corners of a roof where two slopes, at right angles with each other, come together.

**Jamb**—The side-post or lining of a doorway or other aperture.

**Joist**—Timber to which the boards of a floor or the laths of a ceiling are nailed. It rests on the wall or on girders.

**Lattice**—Any work of wood or metal made by crossing laths, rods or bars and forming a network.

**Lean-to-Roof**—A roof with only one set of rafters, falling from a higher to a lower wall.

**Light**—A division or space in a sash for a single pane of glass; also a pane of glass.

**Lintel**—Horizontal piece over a door or window opening, of any material, used for appearance or support of wall above, or both.

**Miter**—To join two pieces at an angle.

**Muntins**—Small divisions separating panes of glass in a window.

**Newels**—The upright posts at the start of the stairway usually receiving the stair rail. On landings and top of staircase for the same purpose.

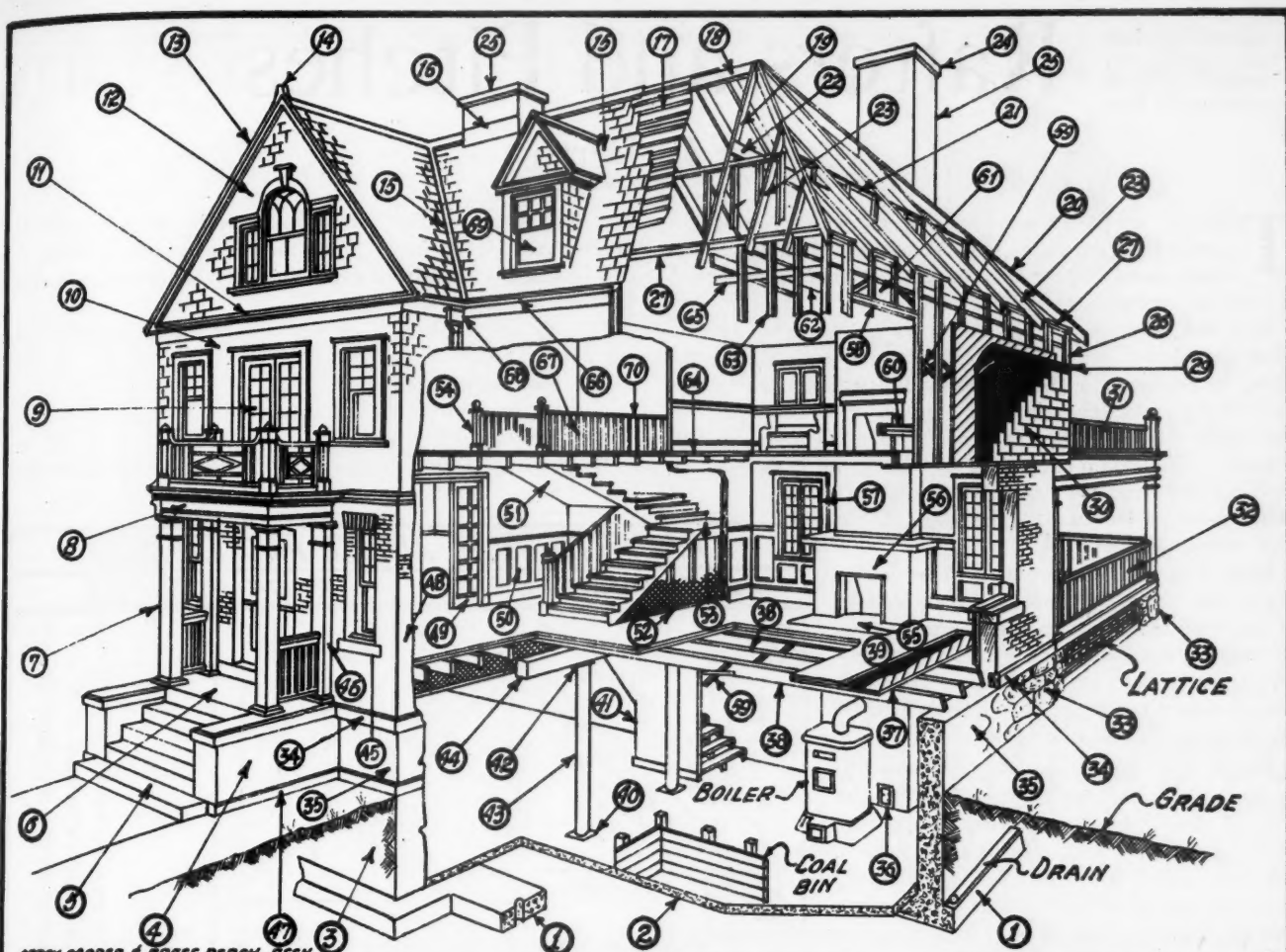
**Plan**—A horizontal section of the walls of a building; as indications on a horizontal plane, of the relative positions of the walls and partitions with the various openings, such as windows and doors, recesses and projections.

**Purlins**—Those pieces of timber which support the rafters to prevent them from sinking.

**Plate**—A piece of timber on top of a wall giving support and bearing to the ends of rafters.

**Plinth**—The block that receives the casings and base of a door opening. In a wall the term plinth is applied to the projecting base or water table, generally at the level of the first floor.

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CUTS, COPPER & BRASS ARCH. ASSN.

1 FOOTINGS.	22 COLLAR BEAM.	43 IRON COLUMN.	57 CASEMENT WINDOW.
2 BASEMENT FLOOR.	23 JACK RAFTER.	44 GIRDER.	58 ROUGH HEAD.
3 FOUNDATION WALL.	24 CHIMNEY CAP.	45 WINDOW SILL.	59 BRIDGING.
4 BUTTRESS.	25 CHIMNEY.	46 PILASTER.	60 ROUGH SILL.
5 STEPS.	26 CORNER POST.	47 GROUND COURSE.	61 TRUSS OVER OPENING.
6 PLATFORM.	27 PLATE.	48 BRICK WALL.	62 CEILING BEAMS.
7 PORCH COLUMN.	28 DIAGONAL SHEATHING.	49 SLIDING DOOR.	63 STUDDING.
8 PORCH CORNICE.	29 SHEATHING PAPER.	50 WAINSCOTING.	64 SECOND FLOOR BEAMS.
9 FRENCH DOORS.	30 SHINGLE.	51 STAIR SOFFIT.	65 RIBBON.
10 FRAME WALL.	31 BALCONY.	52 METAL LATH.	66 GUTTER.
11 EAVES CORNICE.	32 VERANDA.	53 PLATFORM.	67 BALUSTRADE.
12 GABLE END.	33 PIERS.	54 NEWEL POST.	68 LEADER HEAD.
13 RAKE CORNICE.	34 WATER TABLE.	55 HEARTH.	69 DORMER WINDOW.
14 FINIAL.	35 UNDERPINNING.	56 FIREPLACE.	70 HANDRAIL.
15 VALLEY.	36 CLEANOUT DOOR.		
16 CHIMNEY FLASHING.	37 SUB-FLOOR.		
17 SHINGLE LATH.	38 FIRST FLOOR BEAMS.		
18 RIDGE BOARD.	39 FINISH FLOOR.		
19 COMMON RAFTER.	40 COLUMN BASE.		
20 HIP RAFTER.	41 PLASTER PARTITION.		
21 PURLIN.	42 COLUMN CAP.		

## TERMS

COMMONLY USED  
IN  
BUILDING CONSTRUCTION.

CHICAGO.  
L. PERTH.

**Rail**—The horizontal board in any piece of framing or paneling.

**Ribbon**—The term usually applied to a small strip notched into the studding to support the second floor joist.

**Ridge Board**—The highest horizontal timber in a roof to which the rafters are framed.

**Roof Pitch**—The proportion obtained by dividing the span by the height.

**Scarfing**—The joining and bolting of two pieces of timber together transversely so that the two appear as one.

**Screeds**—Long, narrow strips of wood put on horizontally

along a wall and carefully faced out of wind, to serve as guides for plastering the wide intervals between them.

**Scribing**—Fitted woodwork to an irregular surface.

**Shoe**—The lowest member of a baseboard making the finish against floor.

**Sills**—Are the timbers on the ground which support the posts and superstructure.

**Soffit**—The lower horizontal face of anything, as, for example, of an entablature resting on and lying open between the columns, or the underface of an arch where the thickness is seen.

(Continued to page 110)



# Rafters and Pitches

By L. Perth

**T**HERE seems to exist among carpenters a lack of uniformity in the understanding of the various terms used in connection with roof framing, such as: pitches, rafter lengths, rise and run.

It is the purpose of this article to give a clear idea of what the above terms really mean and the accompanying table, in addition to the diagrams illustrating rafters and roof pitches, also contains the lengths of common rafters and gable areas for the three principal pitches.

**Span.** The span of a roof is the total width of the building over the wall plates. Thus, if a building is 24 feet wide—the span of the roof equals 24 feet.

**Run.** The run of a common rafter is the horizontal distance from the center line of the roof to the outer edge of the plates on which the rafters rest. The run, therefore, equals half of the span. Thus the run of a roof having a 24-foot span will be 24 divided by 2, equals 12 feet.

**Rise.** The rise of a roof is the vertical distance from the top of the plates to the top of the ridge, measuring along the center line of the roof. In figuring rafters, the rise is taken as the vertical distance from the top of the wall plates to the upper end of the measuring line.

**Measuring Line.** This is the line on which the length of the rafter is measured and is parallel to the edge of the rafter. This line should always be drawn on the rafter as it simplifies the laying out and helps to avoid mistakes.

**Pitch.** The pitch of a roof is the slant or angle of inclination that the roof makes with the horizontal plane on the level of the wall plates. Roof pitches may be expressed in three ways:

1. In terms of the ratio that the total rise bears to the whole width of the building or span. Thus one-third pitch means that the height of the roof from the plates to the ridge equals one-third of its span. If a building is 24 feet wide, the height of the roof from the plates to the ridge equals one-third of its span. If a building is 24 feet wide, the height of a one-third pitch roof will be 24 divided by 3 equals 8 feet.

2. It may be expressed in terms of its vertical rise to each foot of horizontal run. Thus we may say that the pitch of a roof has an 8-inch rise to 1 foot run. Using the above figures, the run of a roof 24 feet wide is 12 feet. Since the roof rises 8 inches to each foot of run, the total rise will be equal to 12 times 8 which equals 96 inches or 8 feet, which is the same as one-third pitch.

3. The pitch may also be shown by the inclination of the roof to the horizontal plane expressed in degrees and minutes. Thus, if the angle formed by the rafters

and the plane on the level of the wall plates equals 33 degrees and 41 minutes, that roof is of one-third pitch.

The lengths of rafters given in the table were computed by the following rule:

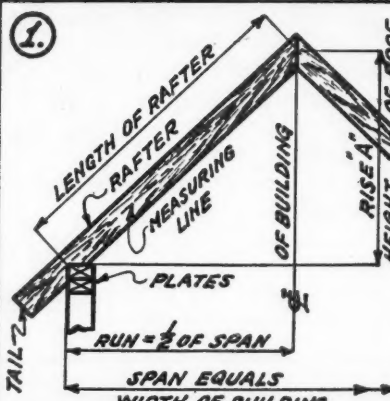
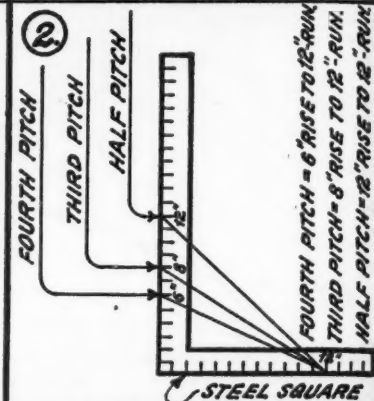
"To obtain the length of a common rafter multiply the span by:

.559 for one-fourth pitch;

.6 for one-third pitch;

.71 for one-half pitch."

By the application of this rule the lengths of rafters for

RAFTERS AND PITCHES.														
COMMON RAFTERS.							ROOF PITCHES.							
														
HALF PITCH.					THIRD PITCH.					FOURTH PITCH.				
SPAN	RUN	RISE "A"	RAFTER LENGTH	AREA OF TWO GABLES	SPAN	RUN	RISE "A"	RAFTER LENGTH	AREA OF TWO GABLES	SPAN	RUN	RISE "A"	RAFTER LENGTH	AREA OF TWO GABLES
6'	3'	3'-0"	4'-3"	18	6'	3'	2'-0"	3'-7"	12	6'	3'	1'-6"	3'-4"	9
7'	3'-6"	3'-6"	5'-0"	25	7'	3'-6"	2'-4"	4'-0"	18	7'	3'-6"	1'-9"	3'-11"	12
8'	4'	4'-0"	5'-8"	32	8'	4'	2'-8"	4'-10"	21	8'	4'	2'-0"	4'-6"	16
9'	4'-6"	4'-6"	6'-5"	41	9'	4'-6"	3'-0"	5'-5"	27	9'	4'-6"	2'-3"	5'-0"	20
10'	5'	5'-0"	7'-1"	50	10'	5'	3'-4"	6'-0"	33	10'	5'	2'-6"	5'-7"	25
12'	6'	6'-0"	8'-6"	72	12'	6'	4'-0"	7'-2"	48	12'	6'	3'-0"	6'-8"	36
14'	7'	7'-0"	9'-11"	98	14'	7'	4'-8"	8'-5"	65	14'	7'	3'-6"	7'-10"	49
16'	8'	8'-0"	11'-4"	128	16'	8'	5'-4"	9'-7"	85	16'	8'	4'-0"	9'-0"	64
18'	9'	9'-0"	12'-9"	162	18'	9'	6'-0"	10'-10"	108	18'	9'	4'-6"	10'-1"	81
20'	10'	10'-0"	14'-2"	200	20'	10'	6'-8"	12'-0"	133	20'	10'	5'-0"	11'-2"	100
22'	11'	11'-0"	15'-7"	242	22'	11'	7'-4"	13'-2"	161	22'	11'	5'-6"	12'-4"	121
24'	12'	12'-0"	17'-0"	288	24'	12'	8'-0"	14'-5"	192	24'	12'	6'-0"	13'-5"	144
26'	13'	13'-0"	18'-6"	338	26'	13'	8'-8"	15'-7"	225	26'	13'	6'-6"	14'-6"	169
28'	14'	14'-0"	19'-11"	392	28'	14'	9'-4"	16'-10"	261	28'	14'	7'-0"	15'-8"	196
30'	15'	15'-0"	21'-4"	450	30'	15'	10'-0"	18'-0"	300	30'	15'	7'-6"	16'-9"	225
32'	16'	16'-0"	22'-9"	512	32'	16'	10'-8"	19'-2"	341	32'	16'	8'-0"	17'-11"	256

Figs. 1 and 2. Showing the Various Measurements of Common Rafters and the Roof Pitches in the Steel Square with, Below, a Table of Roof Pitches.

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LENGTH OF TWO SILLS	AREA OF TWO SILLS
4"	9
6"	12
8"	16
10"	20
12"	25
14"	36
16"	49
18"	64
20"	81
22"	100
24"	121
26"	144
28"	169
30"	196
32"	225
34"	256

mmon  
Table



any span not given in the table may be easily obtained. These lengths, however, do not contain the "tail" or eave projection, which must be added to the length of the rafter when estimating.

**Lean-to Rafters.** To obtain the lengths of rafters for one-way roof, the following rule should be followed:

"Find the length of the common rafter in the table for the corresponding span and pitch, and multiply this length by two."

This is clearly illustrated in Figure 3, where the length of a rafter for a "lean-to" roof for one-fourth pitch and having a 24-foot span is required. Referring to the table in the column under the heading "Fourth pitch," we find that the length of a common rafter for a foot span is 13 feet 5 inches. Thirteen feet 5 inches multiplied by 2 equals 26 feet 10 inches. In other words, a lean-to-rafter is twice as long as a common rafter for the same span and pitch, which is plainly demonstrated in the diagram by taking the imaginary common rafter "B" and swinging it into position "CD."

**Rafter Lengths.** Referring to the column "Rafter length" in the table, it should be clearly understood that these lengths, while being accurate enough for estimating purposes, should not be used for actual work, since in many instances the figures given in this column vary from the correct length of the rafter by a small fraction of an inch.

In laying out rafters for erecting purposes a steel square should be used and particular care should be exercised

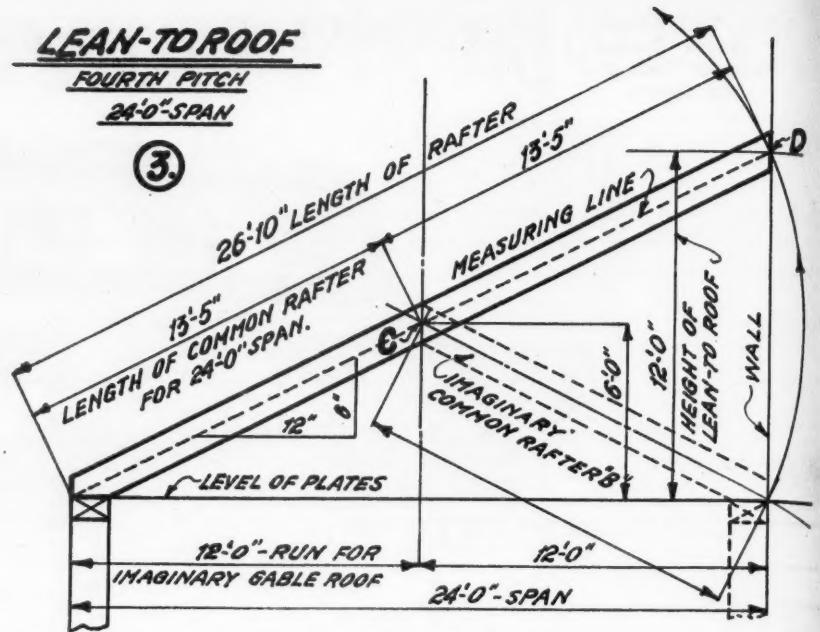


Fig. 3. Showing the Method of Measuring Rafters for a Lean-to-Roof of One-Fourth Pitch.

that the relations between the pitch, run and rise are correctly established. As is shown in Figure 1, the actual length of a rafter is measured along the measuring line, which is the hypotenuse, or longest side of a right angle triangle, the other two sides being the run and the rise.

**Gable Areas.** To the areas of gables given in the table allowances should be added for waste and laps. The gable areas are expressed in square feet.

# A Gothic Roof Problem

By John T. Neufeld

ONE of our readers has sent in an interesting Gothic roof problem. We believe it is worth passing on. The problem is to lay out the valley or hip rafters for a Gothic roof. Note: the hip and valley would be the same as far as outline is concerned. To make the problem more interesting and instructive we have assumed that the addition is narrower than the main building but is to have the same height. This makes it a little more difficult than if the two parts were of the same width.

First we should note that the radius of the main rafter is given and the problem is to lay out rafters number 2 and 3 (page 102). For convenience the dotted lines are numbered and the same lettering is used for corresponding points on all lines.

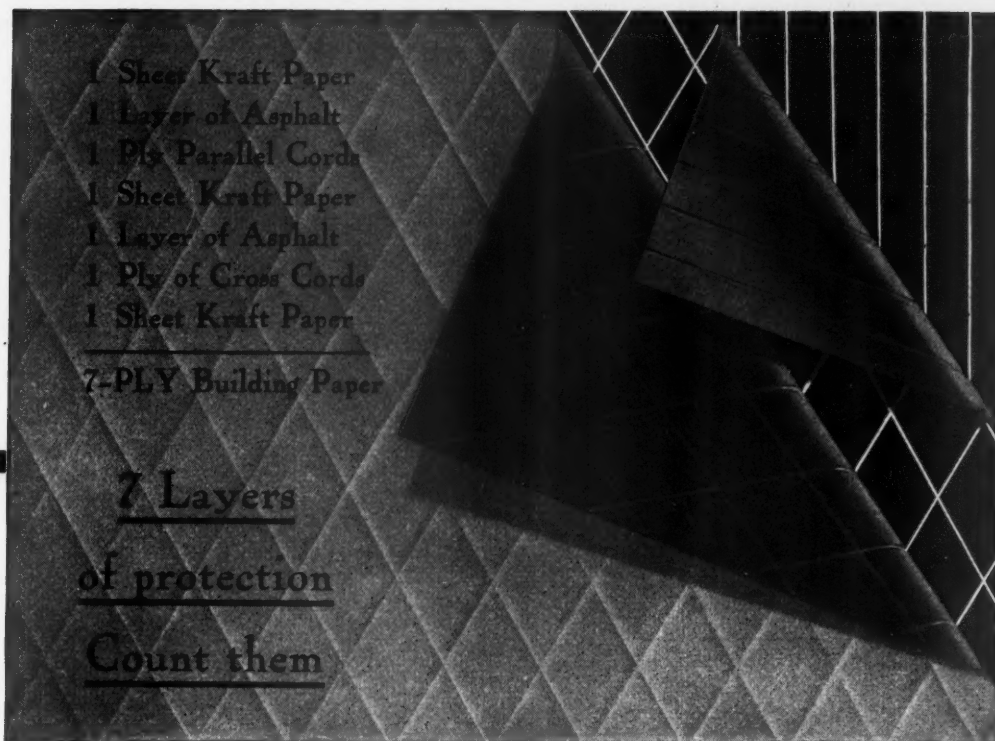
The roof plan should be laid out to any convenient scale say let 1 inch equal one foot. Then draw the center line number 10 through both parts of the plan. The center lines will intersect at the point "B." A line drawn from "x" to "b" will be the base line of the valley rafter, and may be called the run of the valley rafter. The next step is to draw lines from "a" to the base line of the valley (these must be parallel to the edge line). These lines can be any distance apart, but should be rather close together near the edge of the building. From the points "b" that is the intersection of these lines with the base of

the valley draw further lines to the points "c."

We now have a number of points on the base lines of all three rafters. These points are points of equal distance from the edge of the roof, therefore the roof above these points must be of equal height. Thus the point "e" must be just as high as the point "d"; also point "f" must be as high as point "d." All points equal distance from the edge of the roof must also be of equal height. All measurements must be taken from the arch number "1" for which the radius was given. The lines "b-e" are made equal to "a-d" and the lines "c-f" also of the same length. A line drawn through all the points "e" will describe the outline of the valley rafter; also a line through the points "f" will describe rafter number "3." (The upper illustration is given to show the reasoning for these steps.)

All the work up to this point can be on paper. To get the outline on the lumber material for the rafters the barn floor will be convenient.

Draw on the floor a straight line for the base of the valley rafter. Note that an inch on the drawing that you have made is one foot on the drawing made on the floor. Next lay out the points "b" on the base line; then draw the lines "b-e" of length indicated by your drawing made on paper. This gives the points through which the arch is drawn. Proceed in the same way for rafter number "3."



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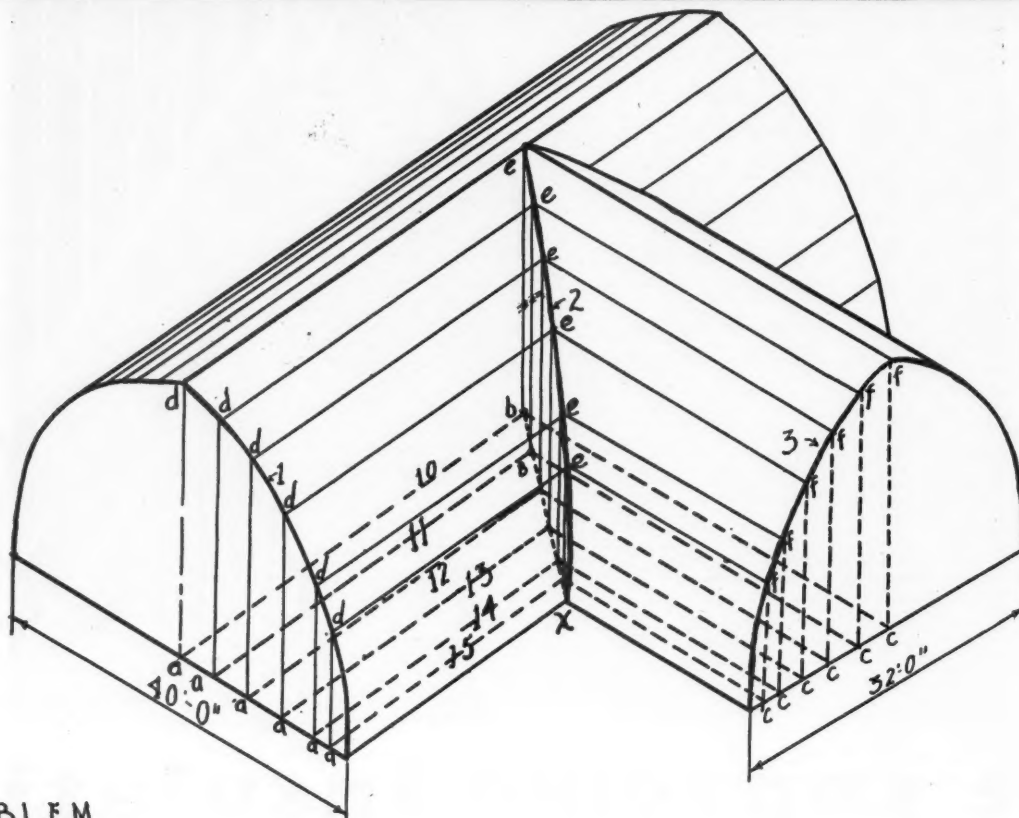
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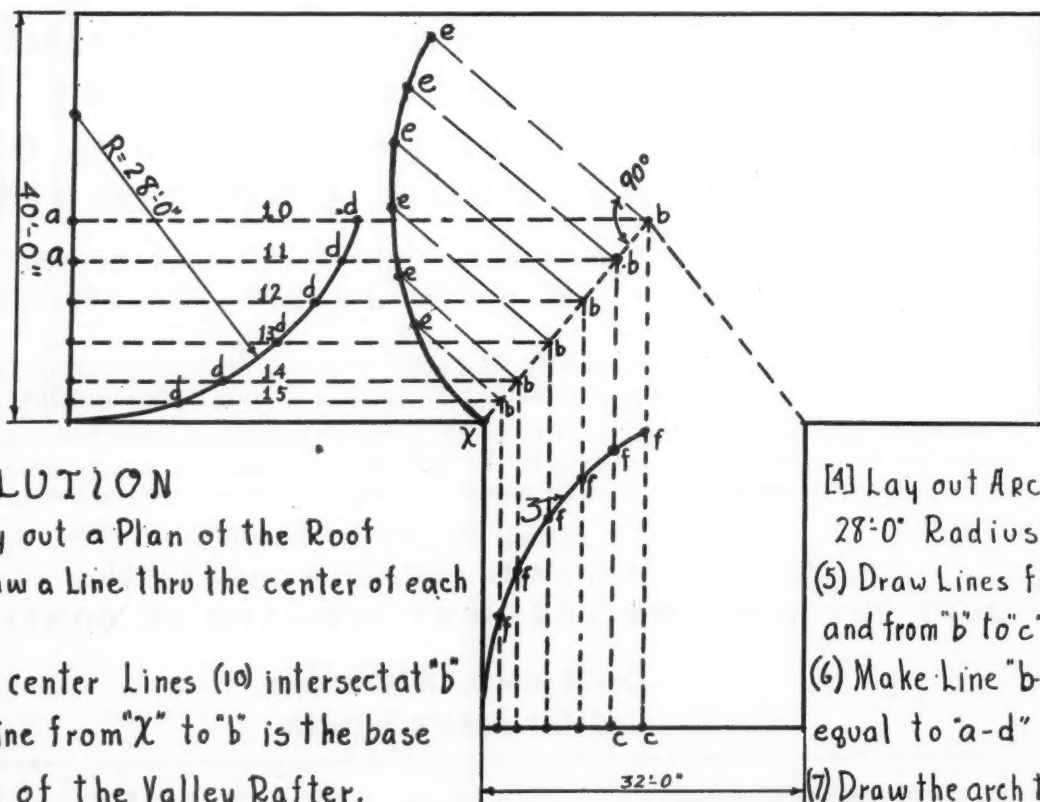
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### PROBLEM

To Lay out The Rafters of a Gothic Roof With an addition - The Main Part is 40'-0" Wide and The Radius is 28'-0". The Point of Radius is on The Base Line. The Addition is 32'-0" Wide, But The Height is The Same.



### SOLUTION

- (1) Lay out a Plan of the Roof
- (2) Draw a Line thru the center of each Part.
- (3) The center Lines (10) intersect at "b"  
A Line from "X" to "b" is the base Line of the Valley Rafter.

- [4] Lay out Arch #1 with 28'-0" Radius
- (5) Draw Lines from "a" to "b" and from "b" to "c".
- (6) Make Line "b-e" and "c-f" equal to "a-d"
- (7) Draw the arch thru These Points

Here Is Illustrated the Solution of a Problem in Framing Gothic Roof, as Discussed on Page 100. The upper drawing shows the reasoning for the steps shown below.

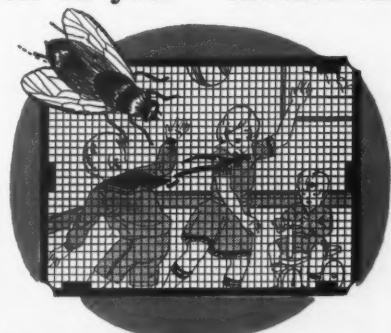
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# HOW DAN DOES IT



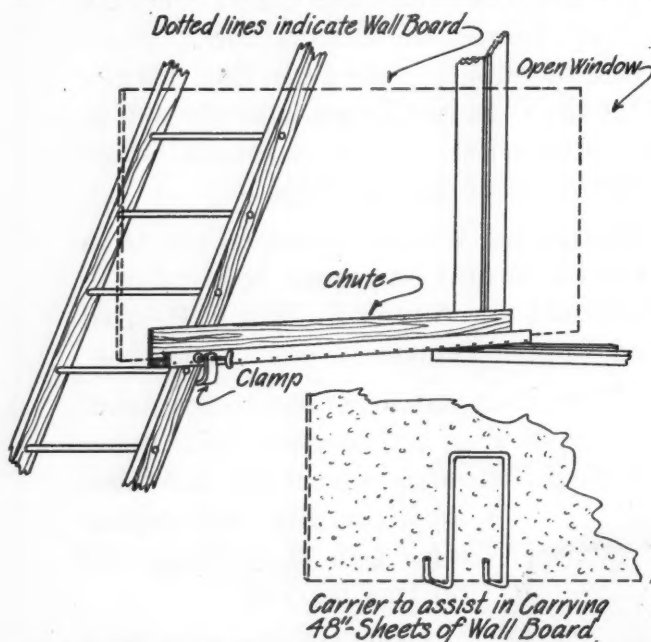
*A Department for Passing "Life Savers" along to other Builders*

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### For Handling Wallboard

WHEN you are called upon to finish off a room with wallboard on an upper floor and the stairway is too narrow or too winding to allow the large sheets to be carried up, try this method. Place an extension ladder against the house, beside a convenient window. Attach to it a chute, as shown in the sketch, made of two boards and a two by four. This should be clamped or nailed to



This Carrier and Chute Are Simple to Make, but Very Useful in Getting Large Sheets of Wallboard Into Upstairs Rooms.

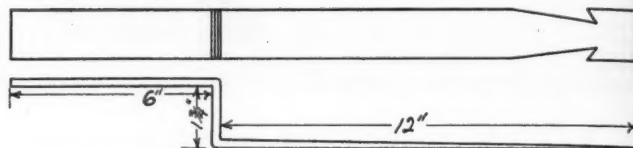
the ladder. Make a carrier, also shown in the sketch, of heavy wire or band iron. With this carrier it is a comparatively easy matter to handle the sheets, taking them up the ladder and placing them in the chute. Once in the chute it is easy to slide the sheets through the window, into the room where they are to be installed.

L. W. PIKE, 17 Brattle St., Brattleboro, Vt.

### A Tool for Removing Shingles

I SUPPOSE that every carpenter has, at some time, taken home skinned knuckles and a bad humor after doing the most aggravating job that falls to his lot, that is,

tearing out and replacing old shingled valleys or patching shingled roofs in general. It was one of these jobs that caused me to design the tool shown in the sketch.



An Old Buggy Spring Worked Into This Shape Is Useful in Removing Shingles and Saves Damage to One's Knuckles.

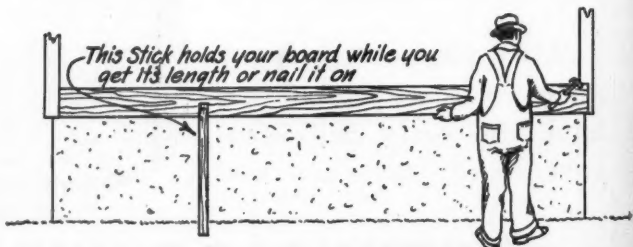
It has proven its worth for 15 or 20 years and perhaps some others would be glad to hear of it.

This tool was made of a thin leaf from a buggy spring. The thin end was ground sharp and the sides were notched as shown. It was then offset about  $1\frac{3}{4}$  inches to keep the knuckles clear in working. It makes a convenient tool for ripping off shingles, cutting off nails. By driving it against them or by engaging with the side notches and striking the offset with a hammer the most unyielding may be cut off or torn out.

L. M. HODGE, 4039 Edenhurst Ave., Los Angeles, Cal.

### When Working Alone

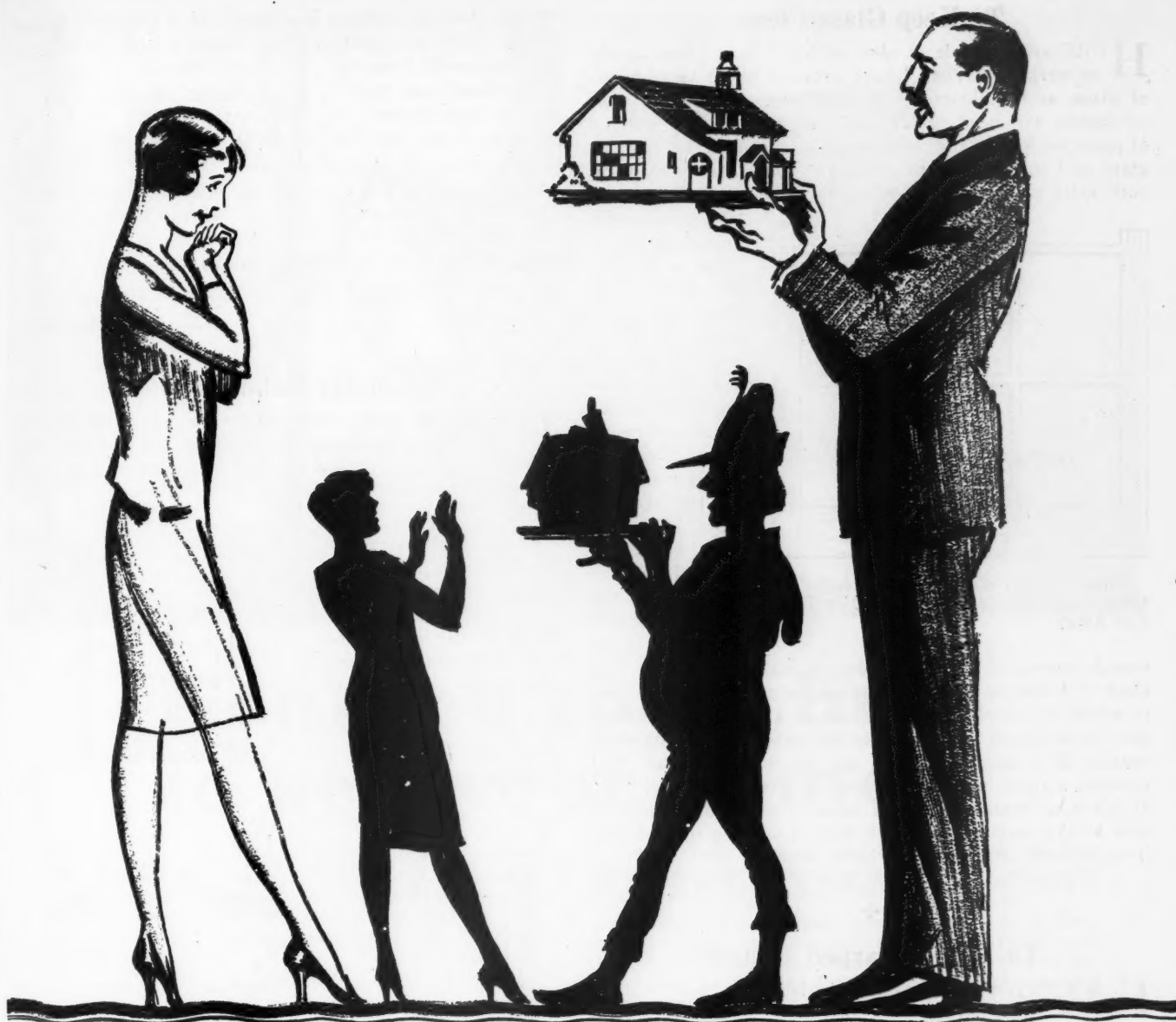
IT is sometimes necessary to put on a long trim board or other unwieldy piece when there is no one around to give you a hand. This can be done more easily if you



A Small Stick Tacked to the Center of a Long Piece of Trim Takes the Place of a Helper When Working Alone.

will tack a stick onto the board, at about its center. Have this stick of a length very nearly the same as the height at which the board is to be nailed. The stick will hold the board up sufficiently so you can do the nailing.

WERNER GRAATZ, General Delivery, Tuckahoe, N. Y.



## Could you sell the "House that Jack Built"?

*Reputations sell houses and that includes the materials that go into them*

WHO "Jack," of the famous Mother Goose jingle was, nobody knows. But what we do know about the house he built and the rat that ate the malt stored in it, makes us believe he was without much reputation as a builder.

Your local reputation is one of your greatest assets. And it is easy to back up your own standing, by using nationally famous materials in the houses you sell.

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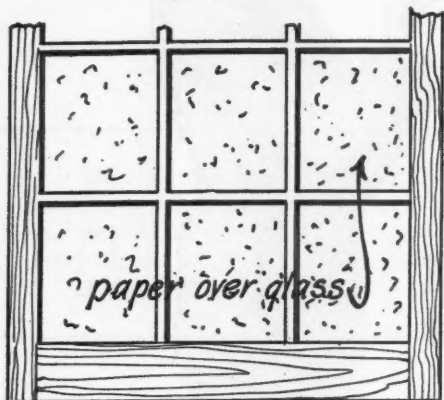
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RS-3-4



### To Keep Glass Clean

HERE are a couple of ideas which I have found handy in working. When I have occasion to set small panes of glass, as in cabinets or French doors, where the sash or frames will need several coats of paint, I cut sections of paper the size of the panes of glass and place them on the glass as I insert it in the opening. Paper can be used on both sides of the glass. When the painting is finished I



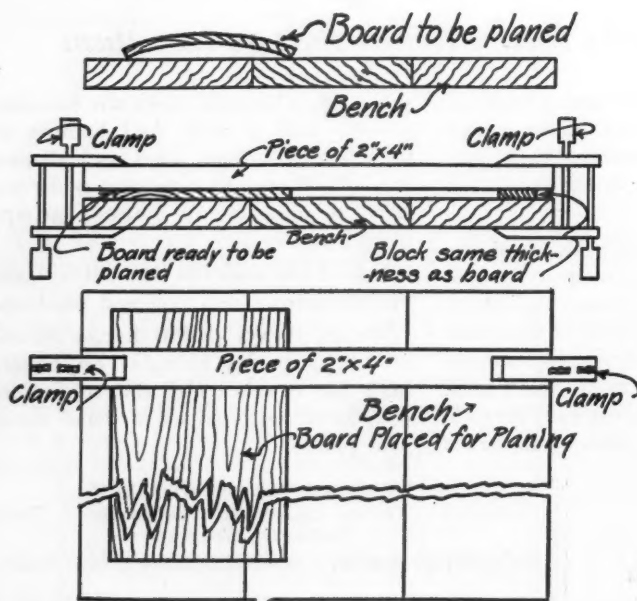
**Paper Over Glass Panes Keeps the Glass Clean While Painting and Is Then Cut Away.**

take a sharp knife and cut the paper out, leaving a clean cut edge and clean glass. Often there is a misunderstanding among builders and others as to exactly what is meant in stating the hand of locks. The following rules, based on the adoptions of the Bureau of Standards and the manufacturers of building hardware, make this clear. The hand of a lock is determined from the outside of the door to which it is applied. In the case of a cupboard or closet door or bookcase, the outside is the room side. If standing outside of a door the butts are on the right, the door requires a right hand lock; if on the left, a left hand lock. If standing outside the door opens from you, it takes a lock with a regular bevel latch bolt; if opening toward you, it takes lock with a reverse bevel latch.

J. PAUL PORTEOUS, 235 W. Moody Ave., New Castle, Pa.

### To Plane Warped Boards

IT is a very difficult matter to plane and sand warped boards which have a width of around 10 inches. Material to be used for shelving and similar purposes should be planed and sanded in order to take off the dirt, dust and machine marks, but often this is not done because of



**A Warped Board Can Be Clamped to the Bench in This Manner for Planing with Good Results.**

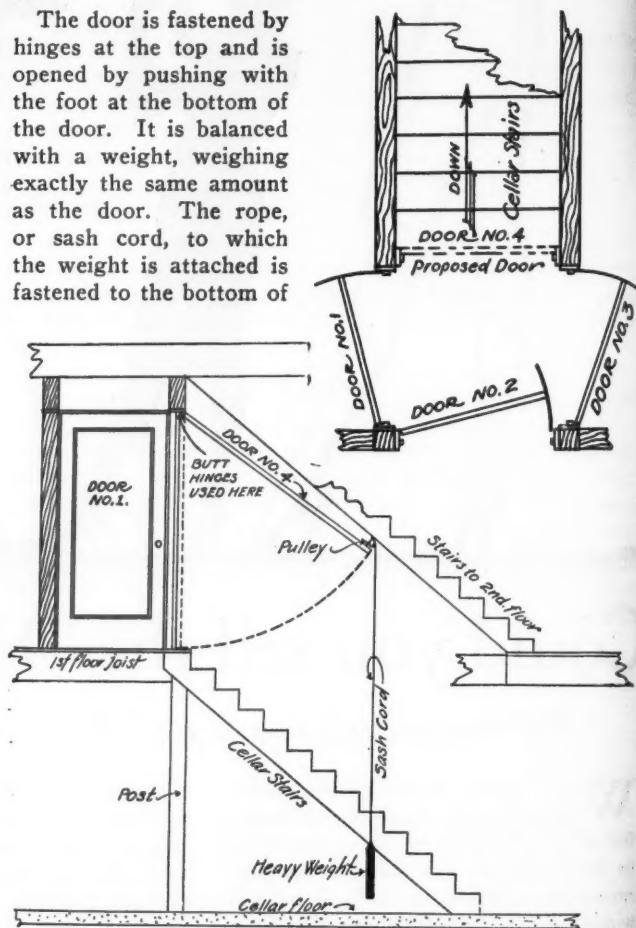
the fact that the material is warped and it cannot be planed evenly. Here is a method which makes it possible to plane such material, however. Place the warped board on a solid bench and place a good strong, straight piece of two by four across one end or the middle, as near as possible to the part that is to be planed. Place a piece of material of the same thickness as the board to be planed under the end of the two by four as shown in the sketch. Then clamp the two by four to the bench at each end. This will press the board down flat so that it can be planed evenly and be used instead of going to waste.

OWEN STACEY, Box 45, care Carpenter Shop,  
Mount Hermon, Mass.

### A Counter Balanced Door

THE accompanying sketches show a method of hanging a door, with ordinary butt hinges, in a cellar way having an inclined ceiling because of the stairs above. It is a simple solution of a problem made difficult by crowded space.

The door is fastened by hinges at the top and is opened by pushing with the foot at the bottom of the door. It is balanced with a weight, weighing exactly the same amount as the door. The rope, or sash cord, to which the weight is attached is fastened to the bottom of

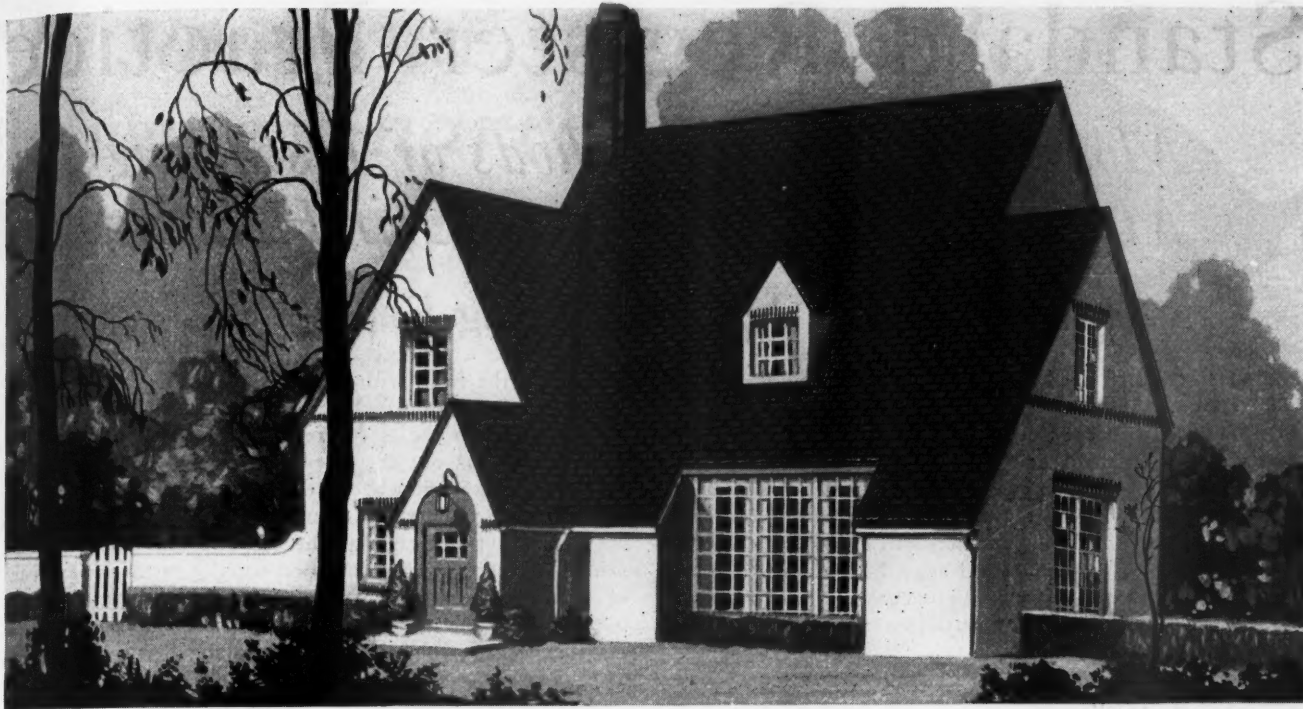


**The Door to a Basement Stair Under Another Stair Can Be Hung in This Manner for Greater Convenience.**

the door and from there is run through two pulleys at the side of the stairway where the weight is attached.

A kick plate is placed at the bottom of the door to prevent marring. Instead of the regular door lock a bolt that can be operated from both sides is used to fasten the door. I have used this combination and found that it works very well. Where a number of doors lead from a hall, as in the plan view, with some of the doors opening into the hall, it is a real nuisance, but this layout takes care of the situation.

JOSEPH P. SCHILTZ, Rt. 2, No. 19, Dubuque, Iowa.



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# Standard Register Practice

## *Modern and Old Methods of Installing Metal Registers in Warm Air Heating*

By R. C. Nason, Heating Expert

**T**HE cardinal factor in properly attaching warm and cold air registers in heating is tightness. Next in importance is stream line design of intermediate pieces, usually known as boxes.

Dirt streaks about registers are directly traceable to cracks outside the borders. Either the aperture has been inaccurately cut or the connection slovenly made. Failure of certain rooms to heat often may be charged to crude design of boots and boxes wherein obstruction to warm air flow is offered, with consequent reduction of the quantity of warmth supplied.

With reference to sheet metal register boxes, the general rules are that the throats of the duct openings must at least equal the warm air leaders to which they are connected, be free from sharp corners and opposing surfaces which offer back pressure. Finished connections demand, further, that all burrs, lips, seams and similar protrusions be peened down smooth and joints be as nearly air tight as possible.

The foregoing points are well demonstrated in Fig. 1, which shows, left, a transition from an oval riser to a deep, floor register box. Construction of this nature might occur when necessary to avoid a joist or other obstruction. The correct design is shown in the same figure, at the right.

Arrows in the illustration at the left reveal what takes place when warm air supply strikes the top of a horizontal pipe to which a vertical duct is connected. Were one to throw a pail of water against a similar surface he would be thoroughly wet from the splash. The action of a warm-air stream is identical, only no visible to the eye. That is, a back pressure is set up which retards the free flow of heat. The ultimate effect is forcing the furnace to generate more heat to overcome the back pressure.

Note the right illustration, by contrast. Here the transition from oval to round is by means of a full-throated round elbow. As the warmth hits the sloping surface only slight impediment to its force occurs. The same comparison is noted in the transition from the horizontal section to the register box. The opposing sheet metal surface in the left figure is straight, whereas that at the right is sloping and of full area. The offensive corner, in reality a dead air pocket, has been chamfered.

A like condition often is found in the tops of heat risers, usually known as stack heads. In Fig. 2 there are shown a double connection, with flat top, right and with a deflecting tee, left. Imagine a current of warm air coming up both designs. In the right figure the air stream would strike

the top of the head with a slap, then pass out through the two side openings into which registers are to be set. In the left hand design the air current would strike the V of the yoke, then pass out the openings, but without substantial impediment to its flow because the direction has been gradual.

Lest it be understood that the evil result described as occurring in the design at the right is universal, let it be said that this type of connection usually receives baseboard or wall registers which have valves, or louvers. These may be hand operated to give right connection piece. Some installers, nevertheless, install registers without valves,

those similar to floor registers having snub louvers. It is by no means rare to find floor registers installed as wall registers and under the detrimental conditions heretofore described.

A correctly valved baseboard register, before installation, may be seen in Fig. 3, which also shows the valve immediately behind the lattice face. A downward or upward push of the little lever at the front adjusts the opening of the required size. Were there no total valve, as is sometimes encountered, frictional resistance would reduce the heating effect.

Studding spaces may be too narrow to permit satisfactory warm air heating with a single register. Some artisans, to overcome the handicap, join on registers of narrow width and greater height; that is, they install registers on their side. This is a profound mistake because experiment has shown that only the upper two-thirds of a wall register performs actual service on account of the velocity of the warm air within. A homely illustration might be that of a railway train which passes its station due to momentum. Warm air in heating passes up a heat stack at substantial velocity, with the result that, although its objective, the register, is reached, it cannot take advantage of the total area of escape.

It is for the foregoing reason that registers under no circumstances may be less in free area than the warm air leader, or basement duct, to which a particular register is connected. A margin of safety, say 10 per cent, provides beneficial results.

One hears much about the comparative merits of baseboard and floor registers for heating first floor rooms. In certain western states the former take precedence. In eastern states floor registers are more common at present. So far as effectiveness in heating is concerned there is little difference. From the standpoint of sanitation and rendering a warm air plant beyond criticism there is no doubt but

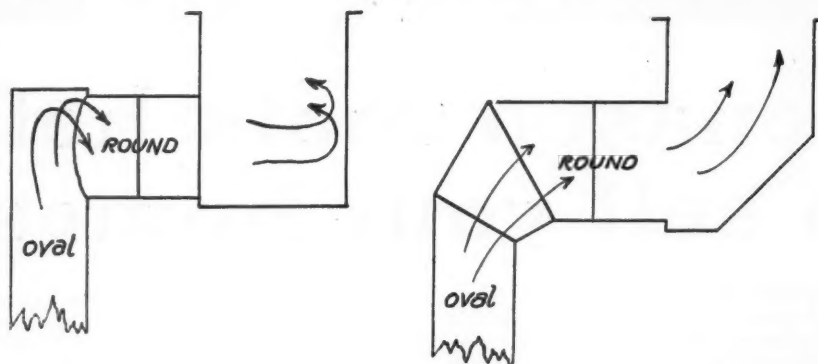


Fig. 1—The Incorrect Method (Left) and the Correct Method (Right) of Making a Transition from an Oval Riser to a Floor Register in Warm Air Heating.

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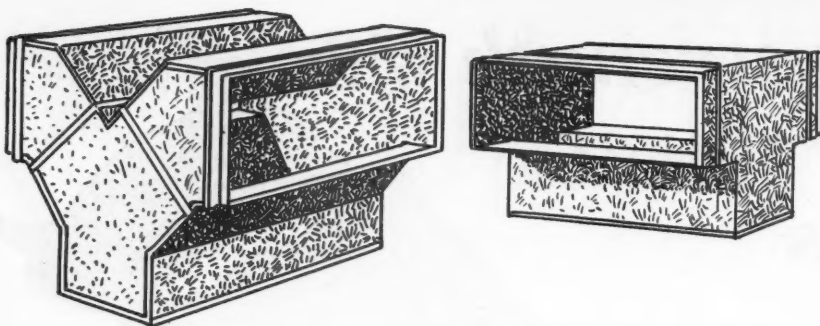


Fig. 2—Two Designs of Double, Combined Stack Head and Register Box. Note the sharp turn the warm air must take in the design at the right and the improved design, eliminating the sharp, at the left.

that floor registers pick up a great amount of dirt which would not enter a baseboard register.

For second floor rooms baseboard and wall registers are standard practice for reasons of sanitation, effectiveness—by offering less obstruction to heat flow—and being above the floor the strata of cool air always found there cannot interfere with the warm supply. This condition is noted frequently on upper floors and requires that wall registers be placed at least nine inches above the floor, otherwise the cool floor air may impede the heat supply. If the warm air supply is of weak velocity and registers are too low cases are by no means uncommon where the downward force of the cold, floor air is greater than the upward current, hence the warm air register acts as a cold air exit.

If upper floor warm air registers were attached to the same risers that admit heat to the first floor and were cold air to fall down the warm air duct the heating value of the entire stack will be nullified. It is singular that great attention is given the matter of circulation of warm air in a building being warmed with a furnace and comparatively little to cold air circulation. Practically all scientific studies concern warm air distribution, whereas it is equally important to know what becomes of the air along the floor line. Misplaced registers often tell the tale, through bad example.

Effort to save time and labor cost are underlying causes of register failure. Sometimes, for example, one sees in residences completed only a few months fair sized cracks around the borders of registers. If they are in floors, lint and dirt gather in the cracks while, if they are baseboard or wall registers, the walls directly above the registers become dirt streaked. This condition, too, is seen often on ceilings.

Cases have been observed where wall registers loosen at their tops. Unless corrective measures are taken they have been known to fall out entirely. Looseness comes from neglect to solder galvanized sheet steel straps, at least one inch wide, to the ends of the register boxes. Straps should be thrust through slots provided in the register frames as shown in Fig. 4, peened down, and they may be soldered. The faces then are screwed firmly into frames. It is excellent practice, too, to lay felt gaskets,  $\frac{1}{8}$  inch thick, between the frames and faces before screwing. No looseness, then, can exist unless screws loosen. This they are unlikely to do, as the straps of the sheet metal box support the frames and perform the bulk of the work.

Instead of sheet iron straps some installers leave flanges on the edges of the register boxes and peen them over the frame all around, as shown in Fig. 3. If a felt or cork gasket

is set on and the face screwed on tightness is assured. There is nothing to be said in defense of the installer who takes neither of the foregoing precautions, but merely screws registers to walls. This is a poor practice and should be discouraged at all times. Under this process an opening is left in the walls, the register boot set into the opening, then the register flanges simply screwed to the lath and plaster without gasket of any kind. The criticism is that in time the screws work out through insufficient foundation. Cracks then permit the exit of soot and dust which streak walls and ceilings.

The Standard Code of the National Warm Air Heating and Ventilating Association suggests that "When a baseboard or wall register is used these must be permanently attached to stack heads" and that floor registers "Shall be provided either with register borders or double register boxes of tin or galvanized iron with an air space of not less than  $\frac{1}{8}$  inch between inner and outer boxes." These directions bring out the important points that registers must be rendered free from provoking fire hazard and must be so substantially set in place that constant travel over them will not weaken their snugness.

Borders of floor registers usually are of the same material as the faces today, although outer slate borders are still favored in some localities. Insetting so that faces are level with the floor is desirable from the standpoints of good appearance and freedom of travel. It is common in some sections for installers who wish to rush a job through to nail wooden strips about one inch square to the sides of the joists and screw register faces to such strips. Such a procedure as this is not considered a good plan because of the likelihood of dust passing through the crevices between frames and wood strips. If manufacturers of register boxes provide a flange on their outer edges these may be peened down, a washer laid on and the face screwed down, thus making a substantial, yet fairly quick method of connection.

Extensive use is now made of recirculation, wherein cold air is passed by individual ducts to the base of the furnace, reheated and again sent to the rooms. This involves cold air grilles, which are customarily installed in the floors of front halls, living rooms, closets and like places. Plain, lattice designs are favored at present. Formerly cold air grilles were of hard wood, but recent trend favors metal due to superior wearing qualities of the latter.

Although cold air grilles number less than one-half the warm air registers they have greater free area than individual warm air registers. Their installation involves much the same features as warm air floor registers.

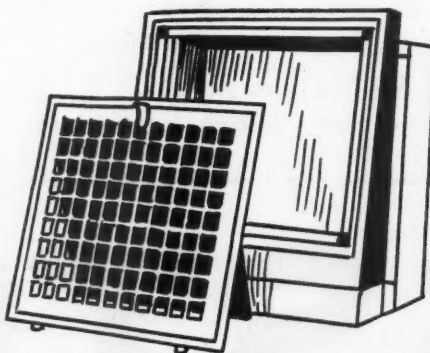


Fig. 3—A Baseboard Register Attached to a Stack Head with Face Removed. Attention is called to the total value behind the grille and the method of peening down the stack flange over the register frame.

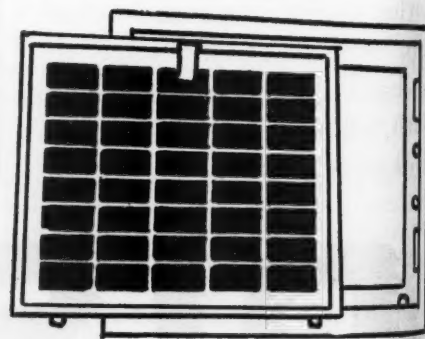


Fig. 4—A Wall Register Face and Frame. Note the slots at the right side of the frame to receive sheet metal straps which should be soldered to the end of the duct collar, thrust through the slots, then peened down.

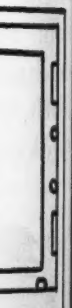
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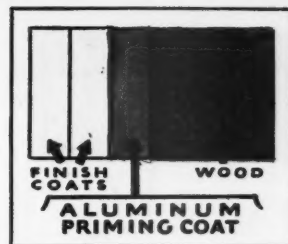
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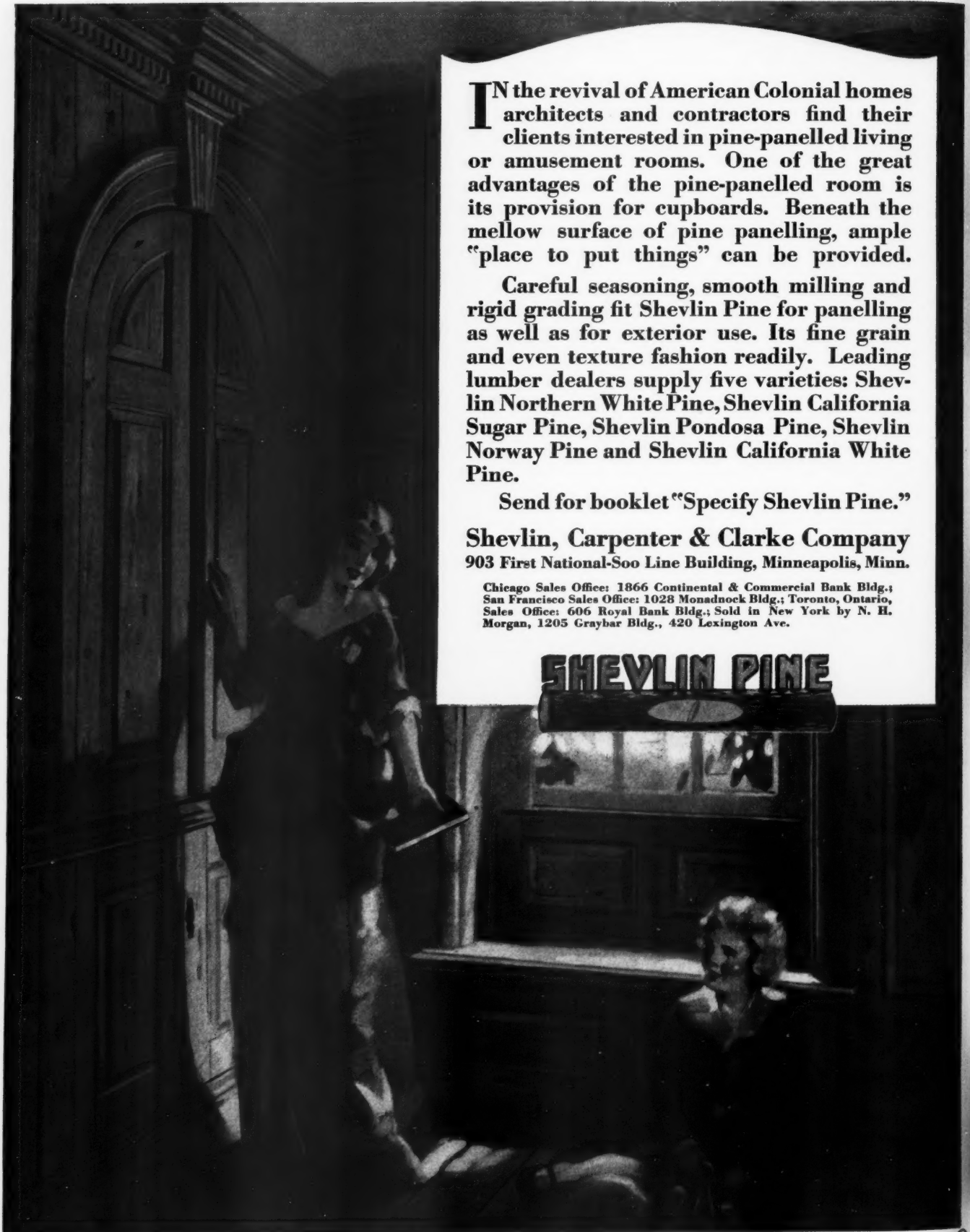
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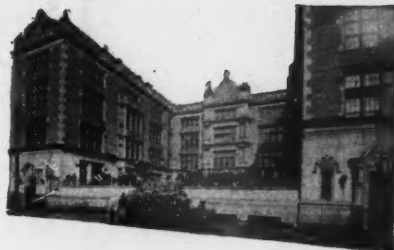
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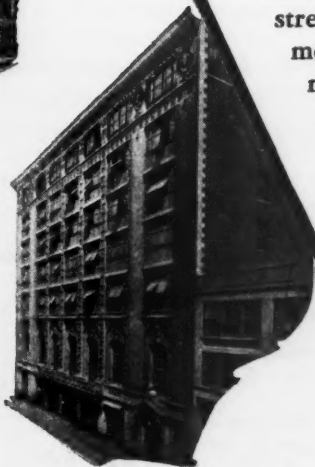
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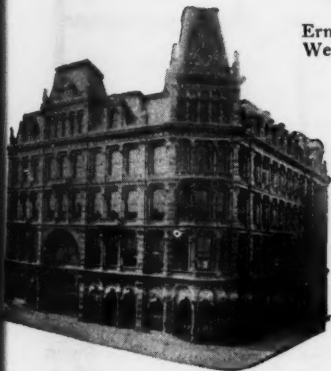
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# Best Farm House

## *Plan Awarded First Prize in American Farm Bureau Federation Contest — Nearly 6,000 Designs Submitted*

**M**OST of the thousands of relief demands coming from rural districts in recent years have sprung from the universal desire among the six million farm families for more comfortable and convenient places in which to live. Six thousand farmers and their wives recently unlocked their ideas of a home in the American Farm Bureau Federation's ideal farm home contest which has just closed. The judges inspected 5,640 plans sent in by farm men and women.

Charles L. Bisbee, Jr., of Moline, Mich., was awarded first prize. The second prize was won by Worth La Rock, of Pine Island, Minn. The other 100 prizes went to farm home planners in various parts of the country.

It is significant that more than a third of the plans came from seven of the rich central west states, ranking as follows with the number of home plans submitted indicated after each state: Iowa, 504; Illinois, 409; Minnesota, 390; Ohio, 305; Missouri, 259; Wisconsin, 242, and Indiana, 217. These states sent in a total of 2,327 plans. Practically every state in the Union was represented with from 3 to more than 500 plans.

The judges' count shows that about three times as many women submitted plans as men.

The bureau's contest gave farmers a chance to show their keen interest in homes. The number entered is significant. Apparently the desire to compete comes from a sincere interest in home planning. The first prize was valued at \$300 and the second \$200; the other prizes were valued at

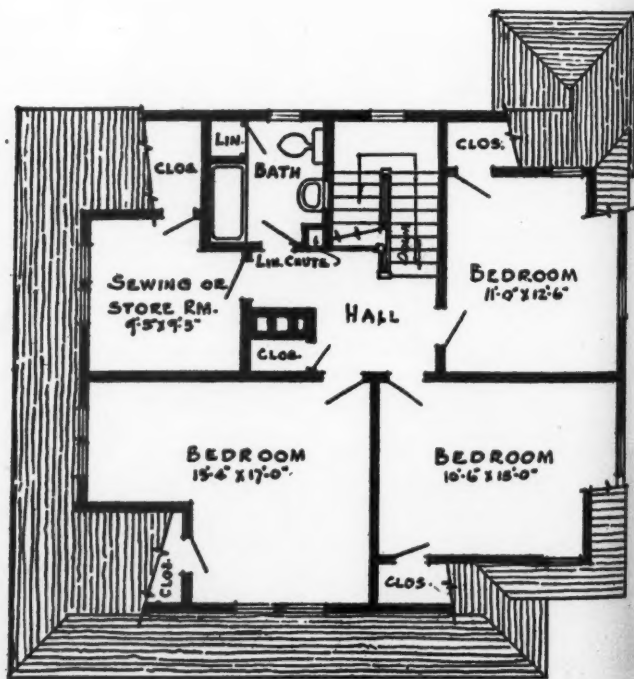
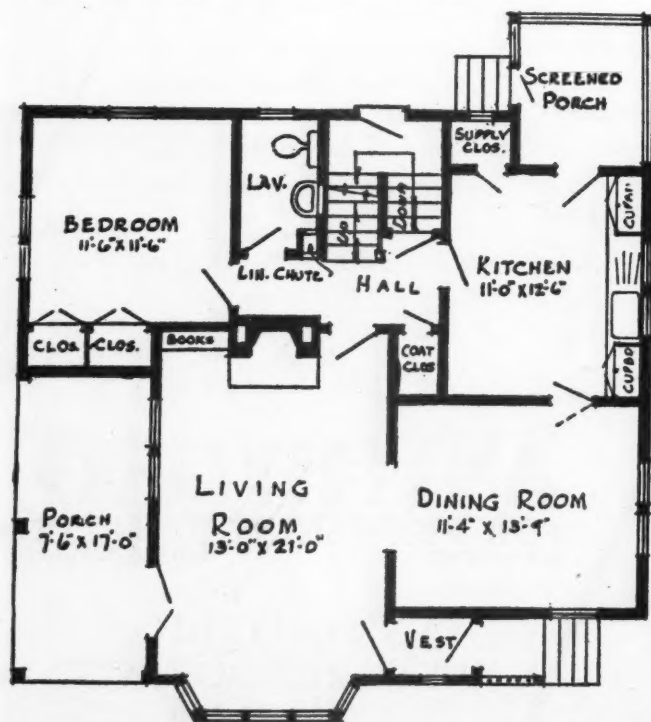
\$20 each. Certificates for home building material were given instead of cash.

Most of the plans submitted, including the first prize winner, were for two story houses. The winning plan calls for a house of the Colonial type commonly found today strung along suburban streets.

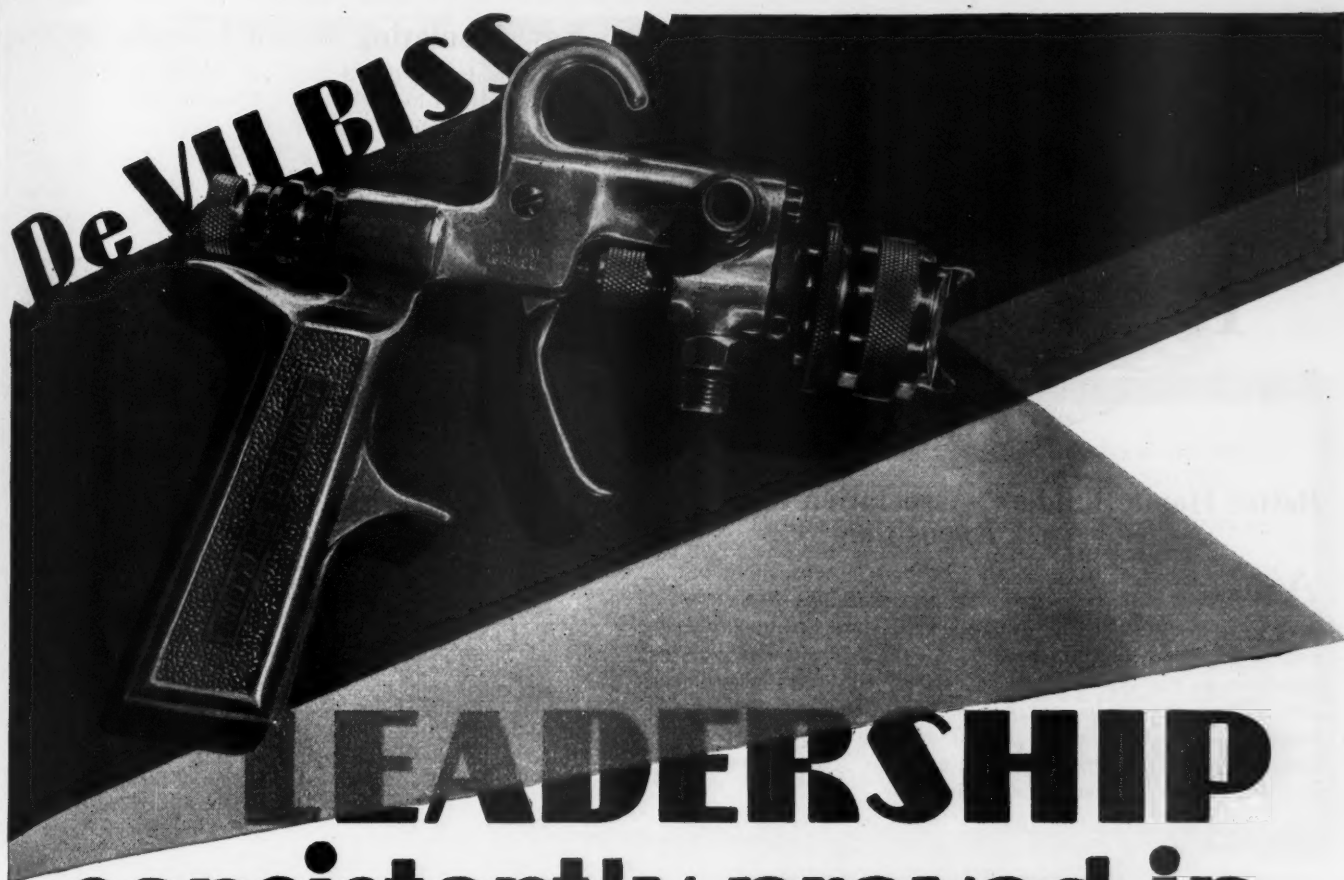
The prize winner's plan allows for four bedrooms, three upstairs and one downstairs. A room for the hired hand is provided for on the main floor. In addition to the bedrooms there is a sewing room, a bathroom, and also plenty of closets. There is free circulation provided in the plan between the living room, dining room and kitchen. Mr. Bisbee's plan was among the simplest submitted.

"Either wide wood siding or shingles are adapted to this house," said Mr. Bisbee in his explanation sent along with the plan. "Window shutters of apple green and a gray green roof would make this house a very pleasing and effective home to build on any farm."

The contest reveals quite clearly that there are many details which must be included in planning a farm home that are not needed in the city home. The planners stressed the need of space for a convenient closet for the men's work clothes. Kitchens were arranged to save steps. Modern plumbing, heating, lighting and other similar aids to house-keeping were emphasized in most of the plans, showing that farmers are anxious to have all the conveniences that the city man has previously monopolized, says a report of the competition.



**BEST OF 5,640 PLANS**—Above is the Plan of an Ideal Farm Home Awarded First Prize in the American Farm Bureau Federation's Nationwide Contest Which Has Just Closed. The plan, like many others entered in the competition, calls for a two story house. It is of the Colonial type. A sketch of main floor is shown at left and second floor at right. Charles L. Bisbee, Jr., of Moline, Mich., submitted the winning plan and was awarded a prize valued at \$300.



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# NEWS of the FIELD



## Better Home Builders' Association to Hold New York Exposition

**A**N exposition of better built Certified Homes, including the furnishing and equipping of the homes, will open May 19 in New York City suburbs. All homes to be exhibited in this exposition are built by Certified Home Builders, members of the National Better Home Builders' Association. They are to be certified by the Certification Committee of each Chapter of this association throughout the Greater New York District, and a purchase loan and re-sale certificate is to be issued on each home.

National Better Home Builders' Association is an organization not for profit, having no capital stock. It was organized and is being operated by the Better Home Builders throughout America. Each member of this association is pledged to a rigid code of ethics and must follow definite rules and regulations in connection with the home building business. It is an organization for the protection of the buying public and through the certification and issuance of the purchase loan and re-sale certificate on each home built by the member, the buying public is assured that it is getting dollar's worth for dollar when buying a certified home. All reputable builders are invited to join this association.

Co-operating with the association in connection with the Better Homes Exposition are some of the leading national and local manufacturers of building materials, supplies, building specialists and dealers. Furniture dealers, manufacturers of house furnishing equipment are co-operating in furnishing and equipping the homes that are to be exhibited.

Local newspapers, national magazines and periodicals in the home building and equipment field, civic clubs, women's clubs, throughout the Greater New York District are also co-operating to make this exposition a success.

There will be more than 100 homes built by members of this association, and located throughout the Greater New York District. These will be thrown open for public demonstration on May 19 in connection with this exposition. The homes will be furnished by local furniture dealers, manufacturers of household equipment and others.

The management in co-operation with the local committees have worked out several other unique and attractive features in the way of publicity which will create local interest in this exposition. A plan has also been worked out to secure the name and address of every person passing through the homes that are exhibited during the week. In connection with this, valuable prizes are going to be given which will insure the name and address of those present. An effective method of following up all visitors to the exposition homes is planned.

Additional information regarding this exposition may be had by applying at 150 Broadway, the district office of the association.

## New Insulating Board Introduced

**A** NEW insulating board is to be made at Greenville, Miss., by the Chicago Mill & Lumber Corporation in a new plant, on which work has already been started. Yearly production at the rate of 75,000,000 square feet will be started in September. A force of 150 men will be employed when the plant opens. Capital behind this enterprise totals \$1,500,000, according to a recent announcement by Walter P. Paepcke, president of the corporation.

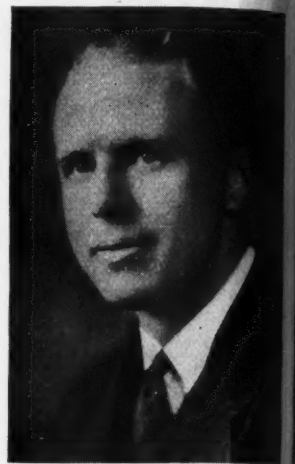
This new board is described as being suitable for use wherever heat insulating or sound deadening qualities are required. It can be stained or painted for interior or exterior usage. In addition to these features, it is strong, light and rigid, having as its base material only the best grades of southern hardwood fibres. The finished board measures four feet wide and ½ inch thick. The length varies with the purpose for which it is to be used.

The two principal officials in charge of the insulating board division of the Chicago Mill & Lumber Corporation are: O'Neill Ryan, sales manager, who was formerly assistant general manager of the Celotex organization, and George W. Powers, who will be in charge of production. Mr. Powers comes from the Insulite Corporation, where he worked in the same capacity. Sales headquarters will be maintained in the Conway Building, Chicago.

The product will be sold direct to large corporate users, and to retail building supply and lumber dealers.

Heat insulation and sound deadening properties of this new board are obtained through its special construction. Arrangement of the hardwood fibres permits small air holes to exist throughout the board, thus causing it to resist heat and cold and absorb sound. The manufacturers state that it will deaden sound to the extent of 30 to 35 per cent, as proved in tests made over a number of months under varied conditions.

The manufacturing process to be used in the production of the new board is simple but essential in bringing about the desired qualities.



O'Neill Ryan, Sales Manager of the Insulating Board Division of the Chicago Mill and Lumber Corporation.



Walter P. Paepcke, President of the Chicago Mill and Lumber Corporation.



George W. Powers, Production Manager of the New Insulating Board Plant at Greenville, Miss.

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# FREE BLUE PRINTS

AND FREE BOOK "HOW TO READ BLUE PRINTS"

## Show You The Way To 9 BIG PAY JOBS

- |  |   |
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| <b>1</b> Building Superintend-<br>ent—\$5,000 to \$12,000. | <b>6</b> Building Estimator—<br>\$6,000 to \$10,000.  |
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| <b>3</b> Appraiser—\$6,000 to<br>\$10,000.                 | <b>8</b> Construction Foreman<br>\$4,500 to \$8,500.  |
| <b>4</b> Material Buyer—\$5,000<br>to \$7,500.             | <b>9</b> CONTRACTOR AND<br>BUILDER IN A<br>BUSINESS OF<br>YOUR OWN—<br>\$5,000 to \$12,000. |
| <b>5</b> Material Salesman—<br>\$5,000 to \$12,000.        |   |

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Learn to read Blue Prints this amazing new way. See how quickly and easily you can train to make \$4,500 to \$12,000 a year! My FREE Blue Prints and big FREE Book, "How to Read Blue Prints," disclose all the so-called "mysteries" of Blue Print Reading—also give some startling facts about the nine best jobs in America—Jobs open only to men who can read Blue Prints. Don't send one penny—just mail the coupon!

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This is no ordinary "school course." It is practical from start to finish. It is based on many sets of real Blue Prints—plans that would cost thousands of dollars if purchased from the architects. Twenty famous experts in all lines of construction work talk over these Blue Prints with you in plain, simple language. Show you every detail. Explain every short cut. Tell you the "secrets" of quick, accurate estimating. Explain superintending. Give you for the first time many inside facts and money-making methods used by the "giants" of the Building Industry.

### IF YOU LIVE NEARBY

Visit our big day or evening school attended by over 1,000 Builders. You can get the same training at home by mail—same plans, lessons and instructions. Your spare time is enough.

### NO EDUCATION NEEDED

This is the kind of training that quickly puts men into \$4,500 to \$12,000 a year jobs—or into profitable contracting businesses of their own. Yet now you get it right at home in only 2 or 3 months. It requires no extensive education. If you can read and understand what is written here you can easily master it.

See what this training has done for others: Bartholomew, Calif., became a contractor at an increase of over 300% his first year; Blair, Okla., stepped up to Superintendent at 100% increase; Dickerson, R. I., increased his salary 100% in 12 months; Marchand, La., says: "My income has increased 200% and I now have more contracting work than I can do."

### AMAZING OPPORTUNITIES

Over seven billion dollars will be spent this year in new construction! No wonder, then, such tremendous opportunities are open to you when you have this "head-work" training in Blue Prints.

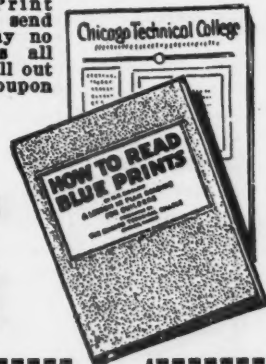
If you want more money—real big money—then choose a "Blue Print" job in Building. Here is the one field where there are unlimited opportunities for advancement.

### MAIL COUPON TODAY

So accept by FREE gift of a complete set of real working Blue Prints and my

fascinating Book "How to Read Blue Prints" that tells all the interesting and instructive facts about Blue Print Plans. Don't send one penny—pay no C. O. D.—it's all FREE. Just fill out and mail the coupon today—NOW!

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also  
FREE**



Chicago Technical School for Builders,  
Dept. D-122, Chicago Tech. Building,  
118 East 26th Street,  
Chicago, Ill.

Please send me your free book, "How to Read Blue Prints," and complete set of real Blue Prints. I understand these are mine to keep without obligation. It is also understood that no salesman will call on me.

Name.....  
Address.....  
City.....State.....

**Chicago Technical  
SCHOOL for BUILDERS**



Dept. D-122, 118 East 26th St., Chicago, Ill.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

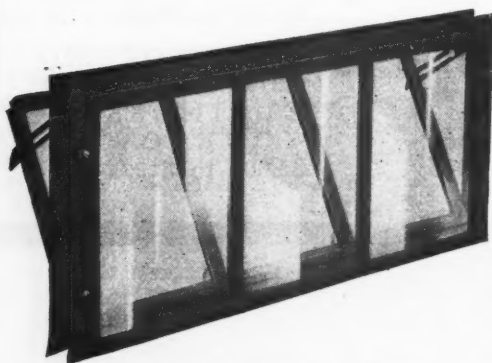


# WHAT'S NEW for the BASEMENT Specialties With Sales Appeal

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

## Storm Sash and Screen Combined

ALL of the basement windows made by one of the leading manufacturers are supplied already tapped and drilled to be fitted with the combination storm sash and screen, shown applied to the window illustrated here. This



This Combination Sash Is Easily Removable and the Panes and Screen Are Readily Interchangeable.

combination sash is a metal frame which is applied to the window by means of a set of clips and screws, making it easily removable. Either glass or screens can be placed in it quickly and easily by

means of fasteners which hold either the pane of glass or the metal bound screens securely in place.

In this way the one unit serves, with glass installed, as a storm window in winter, effectively keeping the basement warm, and as a screen in summer. The clips and screws for attaching to the regular sash are furnished with the storm sash and these are all that is required for a quick and easy installation on the basement window.



## Clean Heating Plants

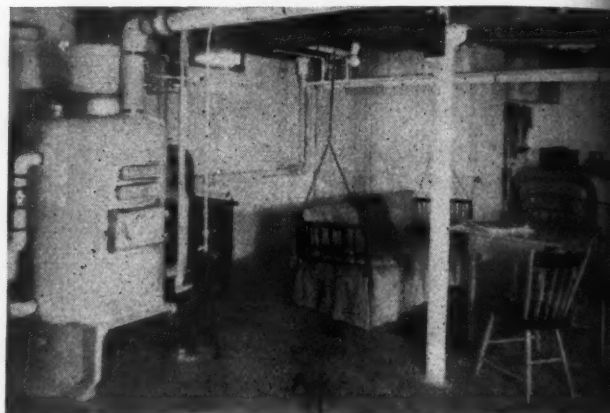
THE picture reproduced here shows a scene which has been made possible by the development of modern heating equipment. Basement space being utilized for living purposes means a heating plant with all dirt eliminated. The heating plant in this scene is an oil burner which means that the coal bin is gone, ashes and dust eliminated. There is a place for the children to play with plenty of room for their toys and no disturbance to the rest of the family. A billiard room is possible, a workshop, a home gymnasium or a cozy den.

This oil burner can be installed right in the present heating plant, whether it is steam, hot water, vapor or warm air. There is no change of the furnace required nor removal of grates. The whole job can be done in a few hours. Once installed the burner is reliable. It has only one moving element and that is so simple and rugged that there is little if any wear.

The mixture of fuel as distributed evenly around the base of the combustion chamber where it breaks into flame. This circle of flame is in direct contact with the metal heating

surfaces and they absorb every possible heat unit from the flame.

With this installation the heating is automatically controlled at all times and the heating plant requires little attention. The labor and time saved amply repay the homeowner for the cost of the original installation. In addition,



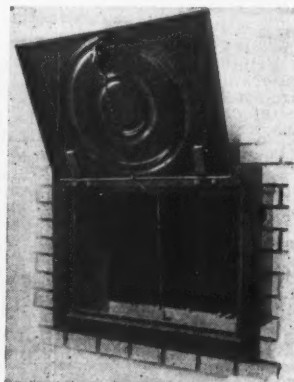
A Clean Heating System Has Made This Basement Available for Living Purposes Instead of Letting It Go to Waste.

the same cleanliness obtained in the basement is also found throughout the house. There is less cleaning to be done and the controlled heat means more healthful living conditions.



## A Long Lived Coal Chute

A NEWLY designed coal chute, recently placed on the market, the salient feature of which is its extreme durability, is shown in the illustration. This chute is made of heavy gauge steel, riveted at the corners. The door opens vertically, as shown, and is self-sustaining, in position. The hinges, which are welded to the frame maintain this position until the door is closed. There is no means of opening the door from the outside. Only by pulling a chain on the inside can the latches be released. This chain and the latches can be seen in the illustration.



This New, Steel Coal Chute Has Been Designed for Durability.

The chute is furnished with either solid or glass doors. It requires a masonry opening 15¾ inches by 22 inches. It is furnished in two depths, 9¾ inches and 12 inches, to provide for carrying thicknesses of walls. It can be used in concrete, brick or frame construction.

Cl

RUUD  
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the new  
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Name

Street

City

State

**SPECIALTIES for Quick Sales and PROFIT\$**

## THIS \$40.00 PRICE REDUCTION Should Decide Your CHOICE of WATER HEATERS

### RUUD ROYAL BLUE NOW \$95.00

—perfect “rust-free” hot water service for small modern homes at a new low price. All RUUD “standard” features have been included plus smart modern rich royal blue finish.

The RUUD ROYAL BLUE has a definite place in small modern homes that no other water heater can fill—also for certain conditions of climate and water. Entirely automatic—open the faucet—the flow of hot water is instant and inexhaustible—close the faucet—turns off the gas.

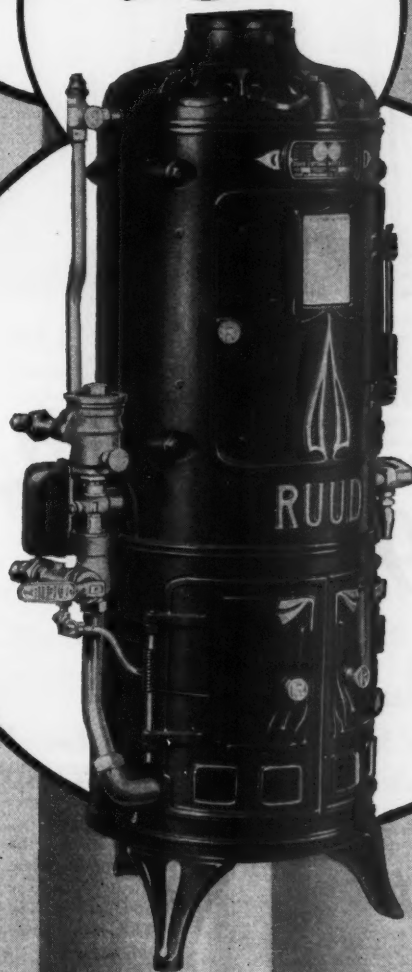
#### *Orders being filled as received*

RUUD ROYAL BLUE at \$95.00 meets the builders' needs for a low price quality heater. Orders already received have taxed the capacity of RUUD factories. Avoid delayed shipments—send in your orders now for your spring building program.

Mail the coupon for complete information about the RUUD ROYAL BLUE at the new low price of \$95.00.

*The*  
**RUUD ROYAL  
BLUE**

*Now*  
**\$95<sup>00</sup>**



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RUUD  
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CO., Pittsburgh, Pa.

Please send copies of  
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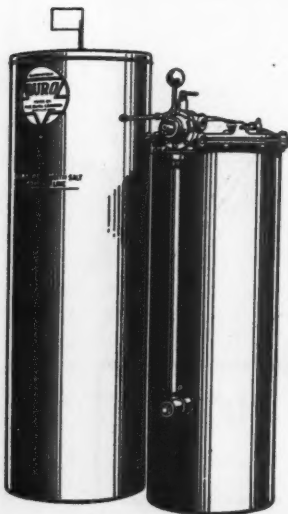
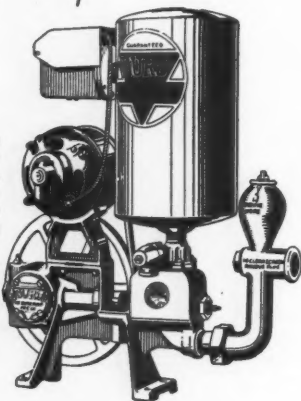
"I'm glad that the equipment in a home interests you as much as the home itself. It is something to which I have given much time and thought and it's the principal reason why all of my homes are soon sold. It will be a pleasure to me to point out to you all the quality equipment in this home. Like all of my homes this one also is equipped with Duro."



**Duro Fresh Flow Water System**

The No. 250 Duro Fresh Flow Water System is a remarkable value for builders. A complete, electric, automatic water system ... 250 gals. per hour capacity, list f.o.b. factory price:

**\$69<sup>50</sup>**



**Duro Water Softeners**

There are three types of Duro Softeners ... the Automatic, the Semi-Automatic (here illustrated) and the Hand-Operated. The list f.o.b. factory price of the latter is

**\$76<sup>50</sup>**

**"Yes, it's equipped with DURO"**

GONE are the days when people bought houses ... now they buy *homes* in which to live life abundantly under the modern scheme of things. Prospective home buyers have educated themselves to look for the things that make home life always comfortable and convenient.

In thousands of suburban and country homes Duro is known for its marvelous performance, unfailingly bringing the delights of fresh running water under uniform pressure ... without care or attention.

Specify Duro and get all the Duro superiorities in quiet, care-free, long-life performance and low operating cost.

All Duro branch offices have factory trained men to help you on any installation. Write for new Duro Catalogs on Water Systems and Water Softeners.

THE DURO COMPANY , , , Dayton, Ohio

**DURO**

Water Systems - Water Softeners

# For New Basements and for Modernizing Old Basements

## Steel Basement Columns

—neat, fire-resisting metal columns that take the place of masonry piers. Just the thing for modernizing the basement. Take less room, quickly installed and economical.



## Ash-Pit Doors

—neat, tight-fitting, clean-out doors used at the base of chimneys for removing ashes and soot.



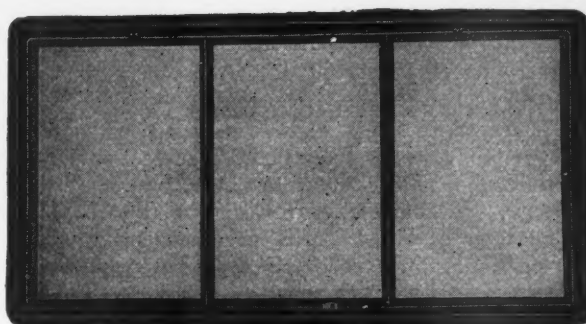
## Electric Meter Boxes

—installed in the foundation of a home enable the meter man to read the electric meter without entering the basement of the house. In addition to the meter it contains a safety switch.



## Donley Coal Chutes

—here's a device that can be installed when the house is being built or to modernize an old home. A coal chute replaces the old-fashioned coal window, protects the foundation during coal delivery. Solid metal or glass doors can be had. Made of finest materials. The best looking chute on the market.



## Steel Basement Windows

—admit 75% more daylight, and afford better ventilation. Unlike windows of wood, they will not warp, shrink, rot or swell.

## Use These Donley Devices

ANY basement, whether new or old, can be made more usable and convenient by the installation of the Donley Devices shown above.

Home renters or builders want a basement that has a maximum of space, that is well lighted and one which is not subject to calls by meter men and coal men.

Many basements with dens or play rooms have fireplaces in them. The Donley Book of Successful Fireplaces tells how to build fireplaces that will not smoke and will burn

properly. A copy may be had upon receipt of 25c to cover cost of mailing. The Donley Catalog of Building Specialties also sent if requested.

**THE DONLEY BROTHERS CO.**  
13910 Miles Avenue • Cleveland, Ohio

THE DONLEY BROTHERS COMPANY  
13910 Miles Avenue, Cleveland, Ohio

Gentlemen:

Enclosed find 25c covering the cost of mailing The Donley Book of Successful Fireplaces. Check this space \_\_\_\_\_ if you want a copy of The Donley Catalog of Building Specialties.

Name \_\_\_\_\_

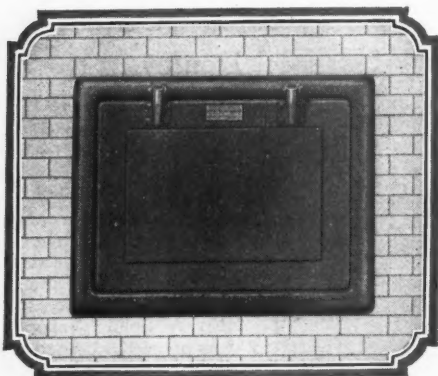
Address \_\_\_\_\_





### Copper Steel Coal Chutes

WITH the storage of coal in the basement came the need for special arrangements which would enable it to be delivered conveniently and without injury to the building. Missing window panes, broken sash and battered frames and walls demonstrated the need of something more substantial than the ordinary basement window. The makers of coal chutes have sought to improve their product by using materials that would resist this rough treatment.



**Toughness and Durability Are Characteristic of This Copper Steel Coal Chute.**

These chutes withstand the hard knocks of coal delivery and protect the walls from defacement and damage and soon save their initial cost by the elimination of repair bills.

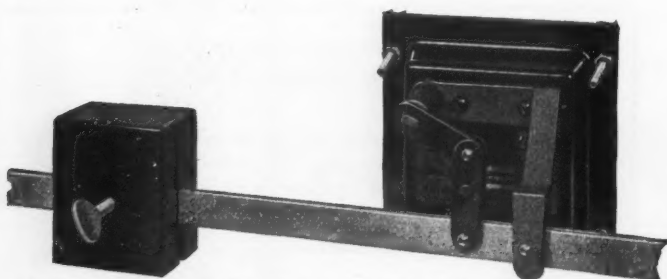
The strength of these chutes is ample, not only for residences but also for apartments, offices, factories, and other buildings. The chutes are neat and attractive in appearance, harmonizing perfectly with the foundation. With all their advantages they are inexpensive, some of the styles costing little more than wood basement windows, it is stated.



### An Automatic Furnace Regulator

WHILE the furnace regulator shown here may be new to many readers, it has been under observation and test for over three years on actual house heating jobs and has proved a thoroughly successful regulator for return air furnaces. This regulator is an adaptation to warm air furnaces of the principle of thermostatic gradual control of draft and check dampers which has for years been employed by power plant engineers and builders of low pressure steam and hot water heating boilers.

On warm air furnaces this regulator is installed in a warm air pipe which leads from the furnace to a warm air register that is always open. It operates on a change of five degrees in the temperature of the circulating air, gradually closing the draft and opening the check damper as the air temperature approaches or goes above the desired set limit; gradually closing the check damper and



**In This Furnace Regulator the Principle of Thermostatic Control Has Been Successfully Adapted to Warm Air Furnaces.**

opening the draft as the air temperature lowers. It maintains, to within five degrees, a uniform temperature of the air circulating from the furnace.

This regulator is simple in construction. Six hollow, individual metal diaphragms are enclosed in an open cage. Each diaphragm contains a gas that expands and contracts very rapidly with temperature changes. The expansion and contraction of these flexible diaphragms operates a lever that controls the draft and check dampers. The action is entirely automatic, actuated entirely by the temperature of the air entering the warm air pipe. No connection is required to hand control chains, room thermostats or other device. It is easily adjusted to any temperature desired.

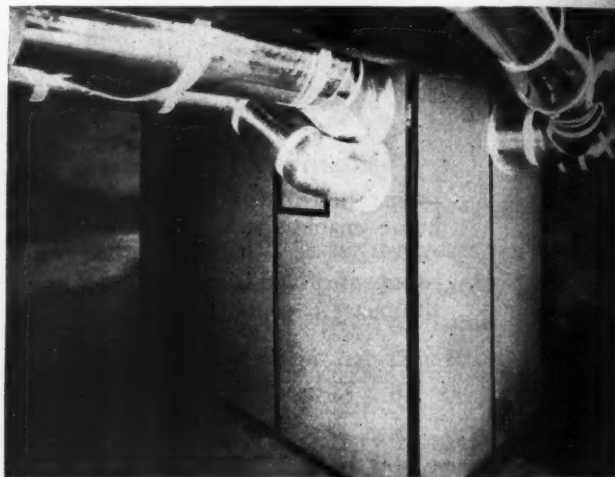
This regulator, which is intended only for use on recirculating, warm air furnaces, is shipped complete, with chains, weights and pulleys, ready for installation.



### Electric Heating for Homes

THE electrically-heated home, without a chimney or coal bin, is now a reality. Homes and buildings in a half dozen cities have been successfully heated by this means this winter. This new method of heating consists of heating large thermal storage tanks of water, using electric current only at night when it can be obtained from the utility at the lowest cost, and releasing this stored heat within the home as required.

The same plan, either in conjunction with the home-heating system or independently, can be used to supply



**One of the Electrical Heating Plants Which Has Been Placed in Actual Operation and Given Satisfactory Heating Service.**

the domestic hot water needs. This heating system can be installed as a hot air, hot water, vapor or double-pipe system. The charging or storage of heat is substantially the same in all cases, the only difference being in the manner of discharging the heat.

Electric heating is no longer experimental and the cost is reasonable, it is stated. The developer of the system states that he believes that the average eight-room home in the central belt of states, comprising Pennsylvania, Ohio, Indiana and Illinois, can be heated electrically for approximately \$350.00 per winter, provided, of course, the building is well insulated.

Heat by electricity is not the product of combustion, and does not consume oxygen. The amount of oxygen in the air, ordinarily used to a great extent by coal, oil, gas or wood fires, is therefore left intact and the products of combustion, such as smoke, gases, soot and ashes, do not exist.

**SPECIALTIES for Quick Sales and PROFITS**

# K-M Incinerators

## For Residences, Apartments, Hotels



**Effective Incineration at a low cost for any building**

1. Chancellor Hall, Philadelphia, Arthur W. Hall, Architect, F. V. Warren Co., Contractors.
2. Elton Apartments, Mt. Vernon, N. Y., Louis Levine, Architect, H. & A. Const. Co., Contractors.
3. J. W. Hawk Apts., Oklahoma City, J. W. Hawk, Architect & Owner, C. E. Huffman, Cont.
4. J. Goldstein Apts., Los Angeles, Clay N. Burrell, Architect, Sommarstrom Bros., Contractors.
5. 1315 Godfrey St., Philadelphia, V. J. Monaghan, Owner.
6. H. L. Simons' Residence, Indianapolis, H. L. Simons, Architect and Owner.
7. R. K. Fuller Res., Loudonville, N. Y., Otto Preis, Architect, Fuller & O'Brien, Inc., Conts.

**FROM** coast to coast K-M Incinerators furnish effective incineration at low cost in all types of buildings. One of the seven models will fill every requirement. K-M Incinerators are of blast furnace design to provide maximum draft. A patented grate arrangement forms a suspended basket to keep refuse away from the fire brick

side walls, thus allowing the circulation of air and speedy combustion on all sides as well as at the top. There are no moving parts in K-M Incinerators — no bearing blocks, shakers or handles. K-M Incinerators are absolutely fool-proof and can never get out of order. Write for detailed specifications.

# KELLOGG MANN & Co., Inc.

315 Grote St.

Buffalo, N. Y.

Please send me complete details of your K-M Incinerator. ☐ I am a builder, or ☐ I am a dealer.

Name \_\_\_\_\_

Address \_\_\_\_\_ City & State \_\_\_\_\_

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





## “Does the house have *running water*? ...then I'll look it over!”

Running water—water under pressure! Nothing in a house located out beyond the city water mains will make that house sell quicker or easier! Nothing will enable you to sell more advantageously—keep your customers more content—pay you bigger returns on your investment.

And here is just the plant you need—the Fairbanks-Morse Home Water System. A completely modern home water system that sums up the best features developed during Fairbanks-Morse's long experience in water plant building. Compact. Clean-cut in design. Automatic. Capacity of 210 gallons per hour—enough water for the whole family's use. Finished in *delft blue* automobile lacquer—reflecting the quality-building found in every detail. And all it costs is \$70.

Find out more about this remarkable plant. Also about our liberal easy payment plan. No matter what your water problem, give Fairbanks-Morse Engineers a chance to help you solve it! No obligation. Send the coupon now.

# FAIRBANKS-MORSE Home Water Systems

Manufacturers FAIRBANKS, MORSE & CO., Chicago, U. S. A.

Branches and Service Stations Covering Every State in the Union

Fairbanks-Morse Products



“Every Line a Leader”

Only  
\$70



Cash f. o. b. factory,  
complete with motor for 60 cycle or  
direct current. Also  
available in 420 gal.  
per hour size at \$100.

### NOTE THESE 13 STAR FEATURES

- 1 Completely enclosed. All parts fully protected.
- 2 Compact—19" in diameter, 21" high.
- 3 Big capacity—210 and 420 gallons per hour.
- 4 Entirely automatic—starts itself—stops itself.
- 5 Easy to install—only two pipe connections.
- 6 Completely equipped, including electric motor, automatic switch, pump and tank.
- 7 Quickly accessible—simply lift hood. The removal of one stud bolt exposes valves.
- 8 Quiet and exceptionally smooth running.
- 9 Self-oiling.
- 10 Supplies steady, full stream without pulsation.
- 11 Fresh water connection with every pump at no extra charge.
- 12 Can be used with large storage tank when desired.
- 13 Genuine F-M unit throughout. Fully guaranteed—the biggest home water system values ever offered.

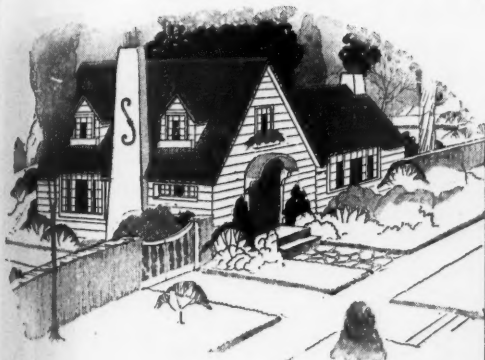
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today!

FAIRBANKS, MORSE & CO., Dept. H-4  
900 S. Wabash Avenue, Chicago.  
Send your FREE Home Water Service Book and Special Clearance  
giving full details about the New F-M Home Electric Water  
System.

Name..... Address.....  
County..... State.....  
My source of water supply is.....  
☐ Shallow Well ☐ Deep Well  
☐ Stream ☐ Spring ☐ Cistern  
R. F. D. ....

**SPECIALTIES for Quick Sales and PROFITS**

• **modern** •  
• *this home* • *this cellar* •  
• *this boiler* •

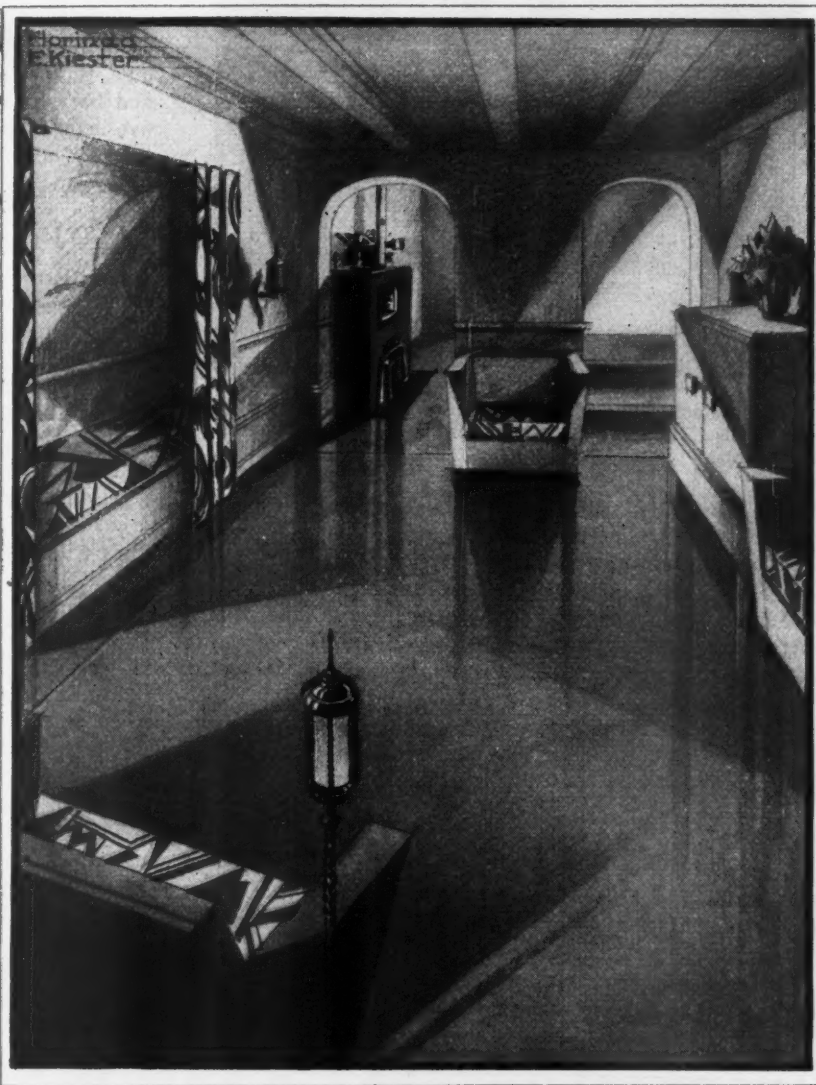


**T**HE trend is toward livable cellars in modern homes. Prospects look for this feature in your houses—expect to find it and buy more readily when they see it.

The key to successful design of a modern cellar is the heating plant. Thatcher recognized this fact. The Thatcher "Elite" enamel jacketed boiler was designed particularly to meet the trend.

It is an efficient boiler—honestly rated—with sufficient capacity to keep your homes warm in the coldest weather. It is economical on fuel, due, to its characteristic "staggered fire travel" construction.—No heat is wasted. These are powerful selling points!

Perfect insulation guards against heat loss. The "Elite" has the thick-



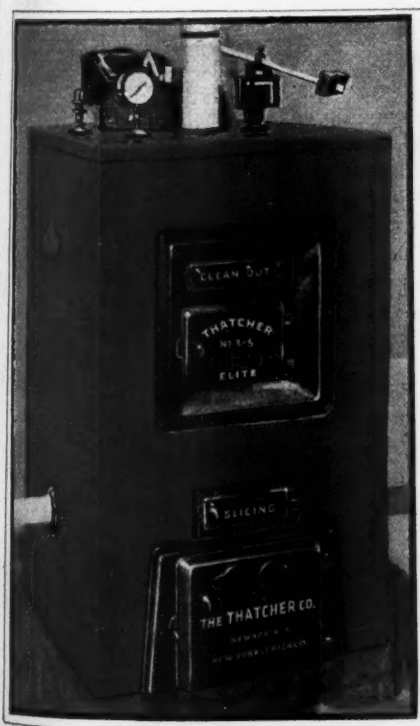
◀ "Modern Cellar Designs" is the title of a new booklet which contains much of interest to you. It is free. Write for a copy today! ▶

est coating of asbestocel ( $1\frac{1}{4}$ " thick) used on any boiler, also an efficient dead air space between boiler and jacket.

It is handsome in appearance—dust-proof—and adapted for use with coal, oil or gas. It was designed for modern cellars—and you can use it in your houses to particular advan-

tage. Get the facts on the "Elite." Its cost is low and its influence in clinching sales is great! Write for complete details!

**THE THATCHER COMPANY**  
39-41 St. Francis St., Newark, N. J.  
New York—21 West 44th St.  
Chicago—341 No. Clark St.

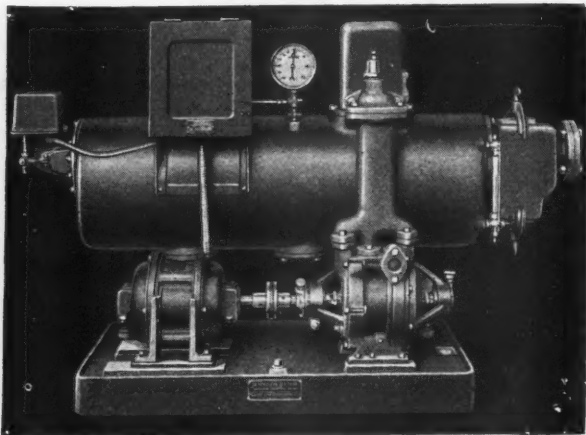


**THATCHER**  
Boilers • Radiators • Furnaces • Ranges



### Improved Vacuum Heating Pump

FOR removing air and condensation from return line heating systems, the vacuum heating pump shown possesses several outstanding advantages, it is claimed. Independent air and water units are built into a compact assembly so that air and water are handled separately. The water unit unloads when not actually pumping and the power it requires is, therefore, directly proportional to the amount of water pumped.



Independent Air and Water Units Are Compactly Built Into This Vacuum Heating Pump, Saving Expense in Operation.

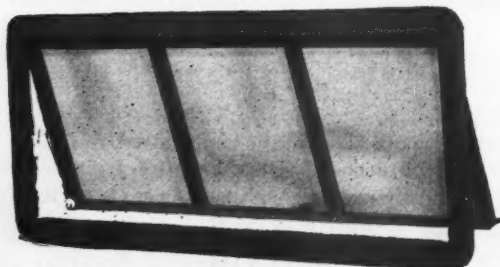
The separating tank, being between the vacuum unit and the return line, is under vacuum and so assures complete separation of air and water. Water is handled only once. Air—representing four-fifths of the total volume that must be pumped—is discharged direct to the atmosphere against no back pressure. These features combine to make the operating cost of the pump low and to assure efficient heating.

This pump is furnished in sizes ranging in capacity from 2,500 to 300,000 square feet, equivalent direct radiation. Either automatically controlled or for continuous operation.



### Copper Steel Basement Windows

IN building a home some people overlook many small, but sometimes most important, details. They want their windows to be the best looking on the street and pride themselves on their taste. They want everything to be as neat and attractive as possible, but they frequently overlook the importance of durability in basement windows.



This Copper Steel Basement Window Gives an Increased Lighting Area and Is Extremely Durable.

After one such experience with poor basement windows the owner will insist on the best. Copper-steel is used in the basement window illustrated here. This material is rust-resistant and durable. According to the manufacturers, this window will change the ordinary, dark, gloomy basement into a well-lighted livable room and at a cost no greater than for wood windows. It is claimed that they will not sag, shrink, swell, or stick and that they give a greatly increased amount of light.

The frame of these windows is made of one piece con-

struction, insuring strength, rigidity and durability. The window is easy to operate and there is nothing to get out of order, so that you can open them in warm as well as cold and damp weather. The only expense in connection with these windows, once they are installed, is an occasional painting.



### Economical Basement Columns

HERE is a metal basement column, strong, neat, fire-resisting and which takes less room than masonry piers. These columns, or stanchions, offer an ideal means of support for the building. They are quickly installed and economical in first cost, being made of reclaimed pipe, thoroughly painted and provided with cap and base. They are supplied in four-inch and five-inch diameters and each diameter in seven and 7½-foot lengths.



### A Pressed Steel Coal Chute

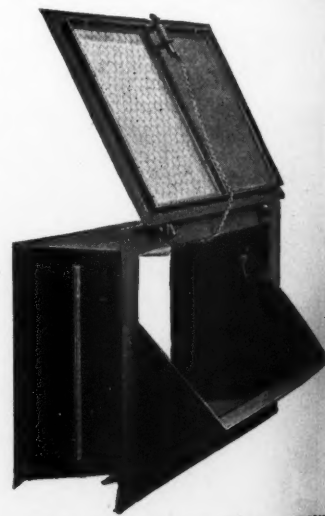
THIS new coal chute is made of 12 gauge, pressed steel, electrically welded into a solid unit. Being made of steel, there is no chance of its being broken by being struck by large lumps of coal. This chute is made with two styles of door, a steel panel door and a glass panel door. In fact, the same door can be fitted with either steel panel or glass panel.

The glass or steel is held in the sash against a cushion of cork by means of patented glazing clips which make a change of panel simple and easy. If the home owner happens to have a steel paneled door and finds that his coal room is too dark he can have the steel panels taken out and replaced by wire glass at any time.

Another feature of this puttyless door coal chute is one of great convenience. The lock has a chain attached so that it can be opened from any part of the basement without even entering the coal room. When the coal man arrives the chain is pulled and the window is opened. If the coal has all been put into the coal room, the delivery man merely slams the window shut and it automatically locks. It cannot, then, be opened except from the inside of the basement. The home owner does not have to enter the coal room at all.

This coal chute is made in two standard sizes. The regular size for homes is 22 inches by 16 inches by 10 inches. It has either steel or glass panels, as desired, and is furnished either with or without a hopper. The regular apartment size measures 32 inches by 22 inches by 14 inches and is also furnished with either steel or glass panel and with or without a hopper.

The glass panels are extra large, giving more light in the coal room than is ordinarily secured with a coal chute window or even with regular basement windows. This chute is a really valuable piece of equipment, as it protects the wall and, with a hopper, keeps the coal off the lawn.



This Steel Coal Chute Will Not Get Broken by Large Lumps of Coal.

A Strong, Neat, Fire-resistant, Metal Column.

**SPECIALTIES for Quick Sales and PROFITS**

**MILLER-STORM CO. INC.**  
Builders of Good Homes

say

# Kernerator Equipped Homes are EASIER TO SELL!



During the past few years we have installed in our homes a great number of your Chimney-fed Incinerators and are pleased to inform you that we have found their use a distinct aid in merchandising these homes. We are very strong boosters for the Incinerator idea. We have an Incinerator in our office building and we have found the one installed in my own home indispensable.

**T**RUE, George W. Miller, President of Miller-Storm Co., Inc., found that the Kernerator in his own home is indispensable.

True, Miller-Storm Co., Inc., have a Kernerator in their office building and by observation have learned how trouble-free it is.

But—neither of these facts would cause this successful Detroit firm to use the Kernerator in the homes they build if it did not pay them to do so. That's what makes Miller-Storm's letter worth the reading!

**Add the Kernerator to Your Sales Force**  
Find out for yourself—include the Kernerator in

the next few homes you build. Call on us for literature to enclose with your promotion letters. Use our free advertising cuts in your local newspaper advertising. Place our attractive Kernerator advertising cards on the handy hopper door during the period of inspection. It will pay you as it has paid others.

Chimney-Fed or Basement-Fed (for homes *already built*), 5 or 6 Room Residence Model \$90; masonry about \$50 additional. Write for complete information and prices on all models or phone nearest representative. Offices in over 100 cities.

**KERNER INCINERATOR CO.**  
753 E. WATER STREET MILWAUKEE, WIS.

## KERNERATOR

REG. U.S. PAT. OFF.

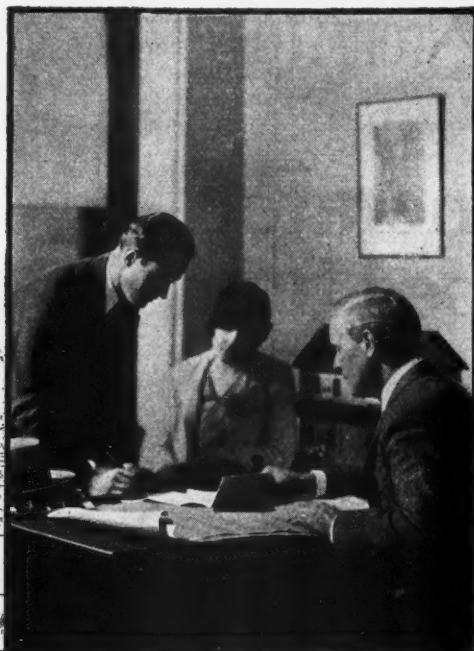
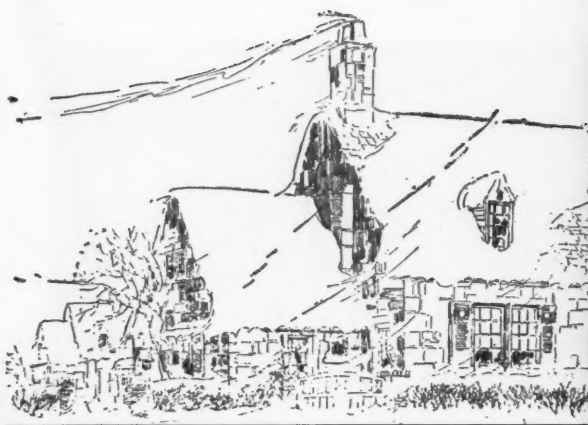
### INCINERATION

*Garbage and Waste Disposal  
for New and Existing Buildings.*



These are only a few of the great number of Miller-Storm Co., Inc., homes in which Kernerators are used and used exclusively.



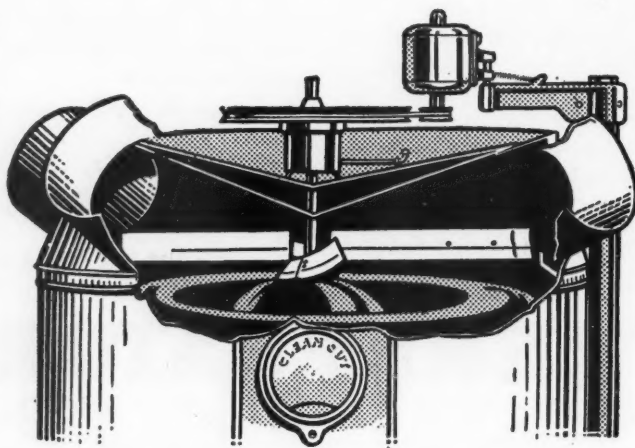


## Holland Forced Vaporaire Heating Helps You Outsell Competition

Put a powerful selling factor in the basement of every home you build by installing Holland Aire-U-Well Vaporaire Heating. Outsell competition. Put Holland national advertising to work for you. Reduce your selling costs and increase turnover. Home buyers want Holland forced-air heating. The modern Aire-U-Well system is an electrically controlled Vaporaire plant with a motor-driven airplane type propeller installed in the top. Warmth is driven in measured volumes to

all parts of the home. Heating response is quick and direct. In summertime the cooling effect of the propeller is equal to several electric fans in every room. You can positively guarantee

heating comfort and satisfaction without assuming responsibility. Every Holland is installed under direct factory supervision and backed by an iron-clad guarantee that protects you and the home buyer. Get the facts. Learn how Holland cooperates with builders and helps them sell more homes.



For address of nearest branch  look in your telephone book

# HOLLAND Vaporaire HEATING

HOLLAND FURNACES MAKE WARM FRIENDS

World's largest  
installers of  
home-heating  
systems

HOLLAND FURNACE COMPANY, HOLLAND, MICHIGAN

Without obligation on my part, please

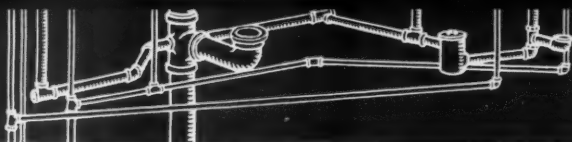
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☐ Send me literature

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525 direct  
factory branches  
and service  
stations



INSPIRED by the sheer simplicity of modern architecture, Crane designers developed the new *Corwith* group of fixtures. With set-back slabs, a few deft touches, they achieved a distinction which brings fresh charm to a modest cottage bath, as well as assists elaborate decorative treatment. In a boudoir-bath of chinois decorations from the time of Marie Antoinette, the *Corwith* lavatory and dressing table in

Lucerne blue are here seen. The complete *Corwith* group . . . lavatories, baths, dressing tables, sinks, in a variety of interesting colors . . . is illustrated and described, with information on sizes and variations in the beautiful Crane brochure, A. D. 46. Write for it. Go yourself and take your customers to see these pleasing new fixtures and other new plumbing ideas at the nearby Crane Exhibit Rooms.

150  
Pounds Pressure



# CRANE

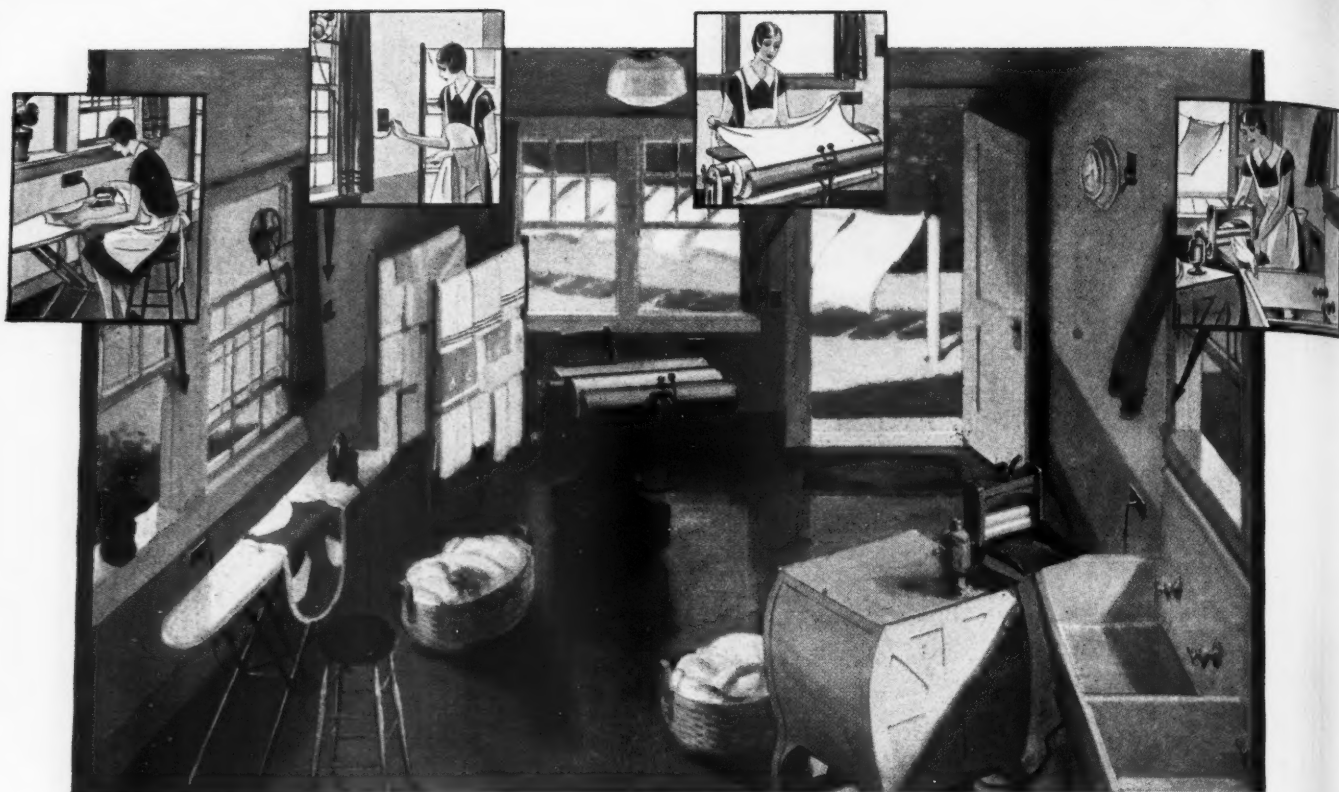
2500  
Pounds Pressure



FIXTURES, VALVES, FITTINGS, AND PIPING, FOR DOMESTIC AND INDUSTRIAL USE

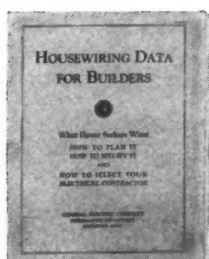
Crane Co., 836 S. Michigan Ave., Chicago + 23 W. 44th St., New York + Branches and sales offices in one hundred and eighty cities





## Buyers these days *demand* a well-wired house

CONSISTENT advertising of the General Electric Wiring System has done much to educate the home-buying public to the need for adequate and correct wiring.



Write to section W-124  
for an important little  
booklet "House-wiring  
Data for Builders."

In fact, they look at rooms with an eye to the comfort they will have when they're furnished. Are there enough convenience outlets for all the important electrical appliances? Is there a switch at the door? If the answer is "no" the chance of sale is greatly decreased.

And, of course, General Electric's name is instantly accepted as a symbol of lasting service and unquestioned efficiency. Any house which has a General Electric Wiring System adds several selling points to each of its rooms!

# GENERAL ELECTRIC WIRING SYSTEM

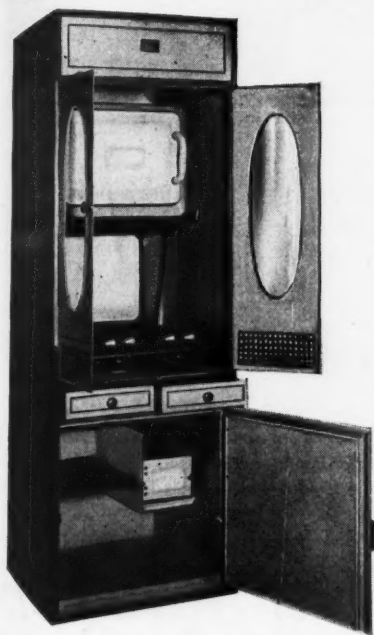
MERCHANDISE DEPARTMENT • GENERAL ELECTRIC COMPANY • BRIDGEPORT, CONNECTICUT

# WHAT'S NEW for the KITCHEN up-to-date Salable Specialties

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

## Stove Cabinet Removes Odors

THE manufacturers of the stove cabinet shown in the illustration claim that it will eliminate all cooking odors, heat, steam and smoke from the kitchen. This cabinet has many novel features. The legs of the stove are eliminated



This Stove Cabinet Eliminates All Odors, Heat, Steam and Smoke from the Kitchen.

and in their place is a sliding shelf, two drawers, a bread box and three large compartments. The cooking odors and heat are carried away through a six inch flue in the top of the cabinet, a draft being formed by holes in a grill work at the bottom of the upper doors. Regular flue lining, with individual flues for each cabinet, is recommended for the hook-up, an elbow making the connection from the cabinet to the wall flue.

These cabinets are built in several heights to conform with other kitchen cabinet units. The color schemes are attractive and the cabinet is wired for electric light. It is constructed on a cold drawn steel channel frame, electrically welded and reinforced at the corners. All parts are made in dies that are uniform and correct. In addition to the cabinet shown in the illustration, this company also makes a style in which the space below the drawers is made into a refrigerator compartment fitted to take any standard coil for electrical refrigeration.



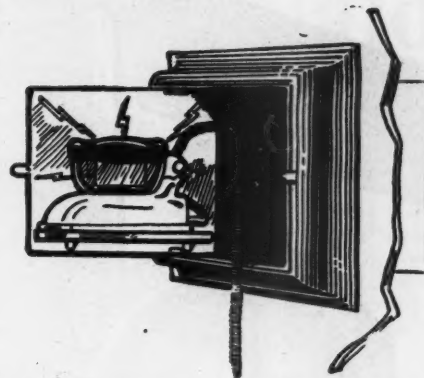
## A Built-In Iron Cabinet

IN the past there has never been a suitable place in the home for keeping the electric iron. The iron had to be allowed to cool on the drain board, or some other inconvenient place, and then put away in the cupboard among the dishes. There has always been a serious fire hazard, too, in connection with the use of irons. The person using an iron might be called, unexpectedly, to the door or telephone and leave the iron turned on. Then, too, when in use the iron has always had to occupy one end of the ironing board where it was in the way.

With the iron cabinet illustrated here all this is changed. This cabinet is built into the wall. It is attractive in appearance and keeps the iron clean and free from rust,

where it is out of sight but always convenient. The shelf, which is the back part of the door, is a handy and safe place to rest the iron while ironing.

The sheet steel lining of the cabinet is covered with two layers of asbestos paper, insuring ample protection against fire. The pure aluminum, ventilating door provides for quick cooling when through using. To install this cabinet a rough opening 10½ inches wide by 9½ inches high is cut in the wall, preferably beside the ironing board.



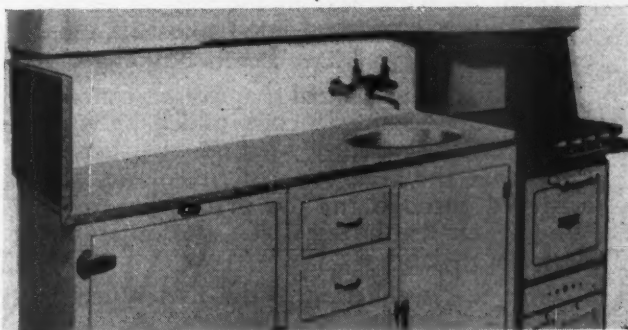
A Safe Place for the Electric Iron, Both While in Use and for Storing, Is the Built-In Iron Cabinet.



## One Piece Enameled Sink Top

THE illustration shows a porcelain enameled round sink top. It is all made in one piece of 16 gauge Armco iron and can be made any size desired up to 10 feet in length.

The bowl of the sink can be placed in any position in the top, either at the ends or in the middle. The sink itself is 16 inches in diameter at the top, 14 inches in diameter at the bottom, and 7½ inches deep. The back and ends can be made any height desired up to 16 inches.



These Sink Tops Are Available in Various Colors with a Contrasting Color on the Edge.

The manufacturers have been enameling these in various colors with a contrasting color on the edges. At the present time there are a number of very large buildings in Chicago in which this installation has been made and is giving complete satisfaction.



The Edgewater Beach Hotel Apartments, Chicago, Ill. Architect Benjamin J. Marshall, Chicago, Ill. Builder, The Benjamin J. Marshall Construction Department, Chicago, Ill. Owner, The Bryn Mawr Beach Bldg. Corporation, Chicago, Ill.

Each one of 307 apartment suites is equipped with a Reliable Red Wheel Gas Range.

Unless the Gas Range has a RED WHEEL it is NOT a LORAIN.

A Representative Kitchen, Edgewater Beach Hotel Apartments, Chicago, Illinois, equipped with Reliable Red Wheel Gas Range.

## Chicago Apartment Hotel Installs Over 300 Red Wheel Ranges!

THE recently completed Edgewater Beach Hotel Apartments in Chicago, after carefully considering many makes of cookery equipment, finally selected Red Wheel Gas Ranges for 307 of their apartment suites.

There are good reasons for this choice made by the architect, Mr. Benjamin J. Marshall, and the owners, The Bryn Mawr Beach Building Corp.

First of all, they realized that women concerned with cookery desire to cook and bake via the Time and Temperature Method. Further, they knew that the realization of this desire is best achieved through the use of the Lorain Red Wheel Self-regulating Oven, the outstanding device of its kind.

With the installation of the Red Wheel Gas

Ranges in all apartments they felt that each would rent more quickly. This is but a natural conclusion because the Red Wheel is the best known oven heat regulator—it has been continually advertised in leading national magazines for ten years.

There are but six makes of gas ranges equipped with the Red Wheel, namely, New Process, Reliable, Direct Action, Dangler, Clark Jewel, and Quick Meal. Over 2,700 schools and colleges use these stoves for cookery instruction.

Each make offers the latest in designs, styles, sizes, colors and finishes. For specific data see Sweet's Catalog, 23rd Edition, Pages C4009-C4018 inclusive. Interesting catalogs on request.

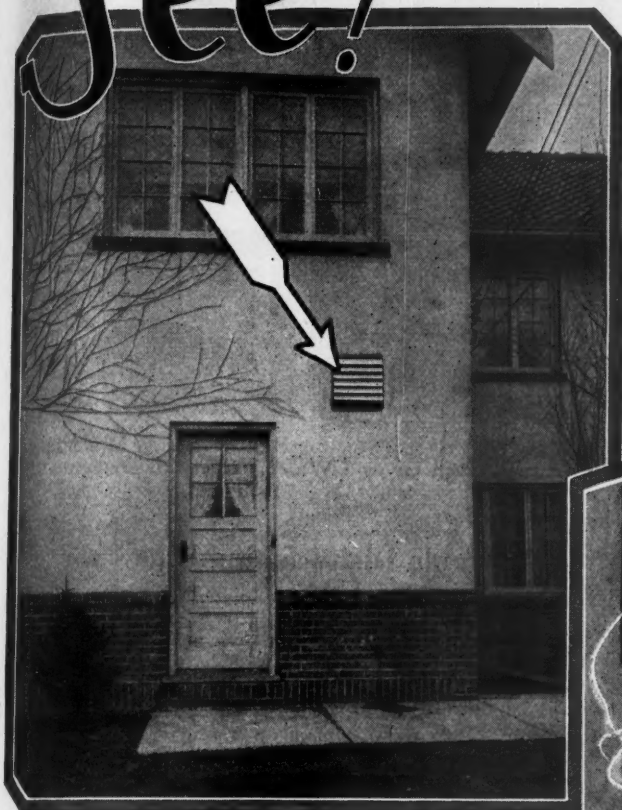
AMERICAN STOVE COMPANY, 233 Chouteau Avenue, St. Louis, Mo.  
*Largest Makers of Gas Ranges in the World*

# L O R A I N

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

**SPECIALTIES for Quick Sales and PROFITS**

# See! how cooking odors and greasy fumes are removed with an **ILGAIR** Electric Ventilator



*I*N the home where there's an ILGAIR Electric Ventilator not a suggestion of cookery passes the kitchen door. All objectionable odors, greasy fumes and excessive heat are whisked away before they have a chance to trail thru the house.

You can't imagine the joys of working in a kitchen that's ventilated with one of these compact, quiet-running ILGAIR exhaust fans. It makes the air pure, fresh and invigorating—adds to the comforts of every room in the house and there's less work for the housewife because walls, ceilings, furniture and hangings stay clean much longer.

Let's tell you about the new and improved built-in ILGAIR Kitchen Ventilator. It's sold complete—cabinet, exhaust fan, and all necessary hardware. And is quick and easy to install.

*Write for illustrated literature.  
Clip, sign and mail the coupon.*



#### MR. BUILDER:

The day is here when no home or apartment is truly modern without an ILGAIR Electric Ventilator.

Practically every architect you talk to is for it—almost every modern building plan published specifies it, and good housekeeping authorities everywhere recommend it.

Nowadays it's the home where there's an ILGAIR Ventilator installed in the kitchen which sells or rents at the top price.

Install an ILGAIR Electric Ventilator in the next home you build—make it a sales and rental feature. Write for price and data sheets and 48 page illustrated booklet.

Yours very truly,

ILG ELECTRIC VENTILATING CO.

P.S. The ILGAIR is the only electric ventilator made with a fully enclosed self-cooled motor—guaranteed as a complete unit.



*for Offices,  
Stores, Restaurants,  
Factories, Public Build-  
ings, Homes, Theatres, etc.*

**ILG ELECTRIC VENTILATING CO.**  
2852 North Crawford Avenue Chicago, Ill.

*Make the kitchen a joy spot*

# Ventilation

## COUPON

Without obligation please send me a copy of your Ilgair Electric Ventilator Bulletin. I am particularly interested in the subjects checked.

Name.....

Full Address.....

☐ Home Kitchen ☐ Public Building ☐ Office ☐ Store ☐ Factory



### Improved Electric Refrigeration

**B**UILT-IN kitchen conveniences attract attention and have a definite rental or sales value because appearance and usefulness are readily recognized by the woman of today. One essential for the well planned modern home or apartment is electric refrigeration. Buyers and tenants look for it and demand it. One of the oldest and largest manufacturers of electric refrigerators has recently brought out a complete new line of both self-contained and remote cabinet units and multiple units for apartment house installations.



**Apartment Equipped with Electric Refrigeration Are More in Demand Than Those Lacking Such Equipment.**

satisfaction and enduring performance.

A recent survey made by this manufacturer, it is stated, shows that in a large number of apartments taken at random and grouped according to class and location, those equipped with their product were occupied to 93.2 percent capacity as against 76.5 percent for buildings not electrically refrigerated. In addition, the increase in rental value directly apportionable to electric refrigeration equalled nearly as much again.



### Enameled Steel Wall Tile

**S**OME time ago a new type of wall tile was placed on the market. This tile, which has since earned a wide popularity, was in reality porcelain enameled sheet steel which was set in a plastic cement on an insulating slab of composition material applied direct to the wall. Because of its reasonable original cost and the low cost of setting, which does not require the service of a skilled tile setter, this tile costs, according to the manufacturers, only a little more than half as much as ceramic tile and so provides a beautiful and practical means of providing tile walls in low and moderate priced homes. It is available in a wide variety of colors and can be applied not only in new construction but also in remodeling, over existing walls.

This tile was formerly made only in three by three and three by six inch sizes, but now, in response to an increasing demand, it is being offered in a  $4\frac{1}{2}$  inch square size. The foundation sheet which was previously grooved on three inch centers, for the application of the tile, is now supplied grooved on  $1\frac{1}{2}$  inch centers which adapts it to use with any of the three sizes of tile, and to fractional sizes which are also furnished. This makes possible a wide variety of design and setting.

By progressive engineering and design and exacting methods of precision manufacturing, they have evolved silent electric refrigeration while increasing efficiency and economy of operation, it is stated. The condensing unit is remarkably accurate scientifically, perfectly balanced and most precisely built. By eliminating noise through design and construction, the machine cannot become noisy through wear. Every unit sold is subjected to tests equivalent to years of service before being released by the factory and the high standard of this product has been proven by years of consumer sat-



**Tile of Enameled Sheet Steel Are Now Being Made in a New Size Which Gives a Wider Variety of Design.**

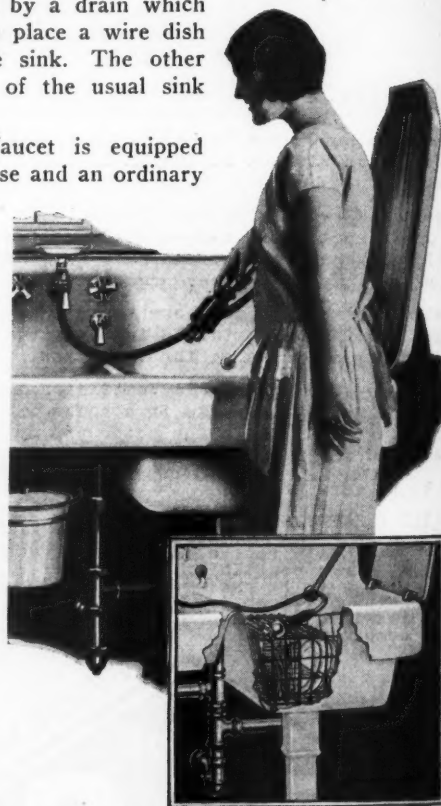


### A Simple Dishwashing Sink

**T**HE kitchen equipped with this dishwashing sink will appeal strongly to women who will, at once, recognize that this equipment makes it possible to do the disagreeable work of dishwashing quickly and easily. Mechanically this sink is remarkably simple. The sink proper is divided into two compartments. The deep compartment at the right is covered by a drain which can be raised to place a wire dish container in the sink. The other compartment is of the usual sink type.

The mixing faucet is equipped with a rubber hose and an ordinary rubber hose spout. A switch lever supplies water either through the spray head or through the spout, as desired. There is no need to detach the hose. The dishes are piled loosely in the right hand compartment which is 12 inches deep. They may be stacked first in the wire basket and then set into the compartment, if desired.

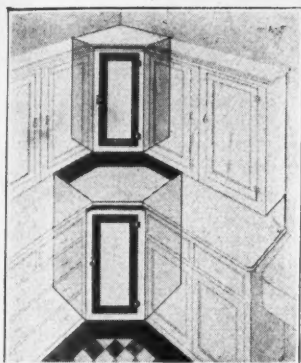
A special soap container in the spray head permits a stream of either soapy or clear water to be thrown on the dishes with sufficient force to remove all sticky substances and then thoroughly rinse. Double brushes can be attached to the spray head for pots and pans. The hose reaches easily to any part of the sink.



**A Sink Equipped as Shown Here Makes Dishwashing Easy and Adds to the Value of the House.**

## SPECIALTIES for Quick Sales and PROFITS

Beauty, convenience and utility are combined in this arrangement of Curtis Kitchen Units. For your kitchens use any of these units, or all. They are all separate and can be combined to fit the available space.



Here is no awkward right-angle that wastes space and makes spots hard to get at. Note how the right angle has been eliminated . . . every inch of space used.

**W**HAT feminine home-seeker would not thrill at the sight of the model kitchen pictured here!

Every kitchen you design can now be a model kitchen. Curtis kitchen units make it possible.

The Curtis kitchen above is made up of individual units that fit snugly together like drawers in a desk. The grouping you see is only one of many combinations possible. You can make your own arrangement so as to use efficiently every bit of available space and, at the same time, save a housewife's hands, her back, her time, and her footsteps.

The individual units are priced in accord with all Curtis items—reasonably, by reason of quantity production. They are sold in any desired combination. The units come in a range of sizes ample to meet every condition

of space. They are built by craftsmen . . . with special Curtis features.

Curtis Kitchen Units come to you sanded and ready to finish so as to harmonize with any decorative treatment you may plan.

These units are only a few of the new additions to the Curtis line of woodwork. New re-creations of Colonial mantels, doorways, entrances and stairwork are now available, together with the large line of other authentic woodwork designs made of selected wood by skilled craftsmen.

The leading dealer in woodwork in your town (if you are East of the

Rockies) is probably a Curtis dealer. If you do not know the Curtis dealer serving your community, ask us who he is.

Also use the coupon for free literature descriptive of the new Curtis kitchen units and other Curtis reproductions.

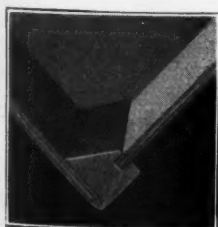
Visit Curtis Woodwork, Inc., Display Rooms and Sales Office, Room 201, 9 East 41st St., New York City. Chicago Display Rooms, Curtis Door & Sash Co., 1414 S. Western Avenue, Chicago, Ill.

*The Curtis Companies Service Bureau*  
931 Curtis Building, Clinton, Iowa

Representing

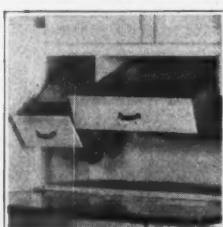
Curtis Companies, Inc., Clinton, Ia.; Curtis Bros. & Co., Clinton, Ia.; Curtis & Yale Co., Wausau, Wis.; Curtis Sash & Door Co., Sioux City, Ia.; Curtis, Towle & Paine Co., Lincoln, Nebr.; Curtis Door & Sash Co., Chicago, Ill.; Curtis-Yale-Holland Co., Minneapolis, Minn.; and Curtis, Towle & Paine Co., Topeka, Kans.

1866  
**CURTIS**  
**WOODWORK**



The cutlery drawer (to the right of the sink in the picture) tilts forward as you open it. So do sugar and flour bins.

Here is the Curtis reinforced sanitary corner that lends strength to drawers and makes them easy to clean.



THE CURTIS COMPANIES SERVICE BUREAU  
931 Curtis Building, Clinton, Iowa

Please send me FREE descriptive literature about new Curtis

Kitchen Units, and \_\_\_\_\_  
(Fill in other information desired)

Name \_\_\_\_\_

Address \_\_\_\_\_

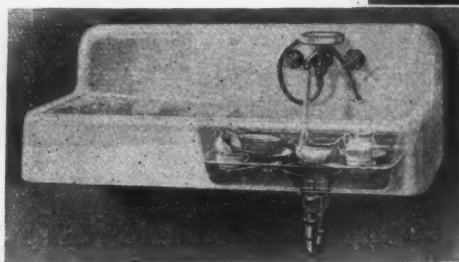
City \_\_\_\_\_ State \_\_\_\_\_



### A Practical Sink Strainer

**A** NEW fitting increasing the usefulness of the kitchen sink and enabling the modern housewife to discard her dishpan and escape the drudgery usually associated with it is a radically new drain control that makes it possible to fill the sink with water, for the washing of dishes, vegetable and fruits, for laundering and for many other purposes.

When the drain is opened, the water empties rapidly through a large five-inch outlet, rushing out with sufficient force to carry with it all debris except solid matter. The latter collects in the large cup-like strainer, which is easily re-



**A Sink Equipped with This New Strainer and an Enlarged View of the Strainer Itself.**

moved for emptying. The strainer then is rinsed and dried.

The strainer is substantially constructed, and is plated with chromium, assuring its durability and the permanence of its platinum-like finish. There is no part to break or get out of order, no ridges or recesses to catch dirt or waste.

There are two types of strainers offered—the hand strainer and the lever strainer. In the former, the housewife gives the drain a lift and a twist to empty the water and debris and in the latter the drains are opened and closed merely by raising and lowering the lever in the back of the sink, thus making it unnecessary to immerse the hands into the water to drain the sink compartment.

An overflow leading from the sink compartment directly to the drain is provided with all sinks equipped with lever strainers. This overflow also can be supplied with sinks having hand strainers.



### Electric Range Fits Any Kitchen

**T**HIS new range makes a particularly satisfactory piece of kitchen equipment for either new or old houses and apartments, as it can be connected to any convenience outlet and does not require any special wiring. It is constructed of sheet steel throughout, finished with triple baked black enamel, with a white, vitreous porcelain, enameled top and oven panel and with white front legs. Its height over all is 33 inches. The top measures 14 by 22 inches and the inside measurements of the oven are 13 inches high, 11¼ inches wide and 12 inches deep. The oven is heavily insulated and has an oven heat indicator mounted in the panel of the oven door.

This range has two circuits of 1,100 watts each, operated by two, four station reciprocating switches. The two top cooking elements are controlled with a switch at the left. The first station operates the eight inch element at 1,100 watts, the second station operates both eight and six inch elements at 550 watts each, the third station operates the six inch element at 550 watts and the fourth station is "off."

The oven elements are both of the two heat type, 1,100 watts each on high and 500 watts together on low. This

gives a wide range of heat control for low and high heat. It will appeal to the housewife who is the prospective home buyer most interested in the kitchen equipment. In fact, this whole range unit is an item of household equipment which the builder can depend upon to increase the salability of his houses.

For remodeling jobs, too, this range offers a sales opportunity which cannot be overlooked. The fact that it can be operated from an ordinary convenience outlet means minimum cost.



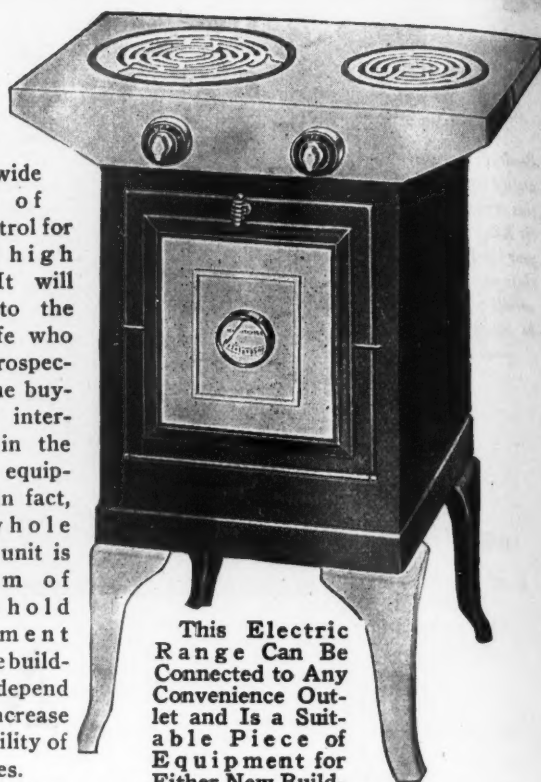
### A Kitchen Clothes Drier

**F**OR modern small apartments, where space is at a premium, the clothes drier illustrated here can be installed in the kitchen, where it is always ready for use, but never in the way when not wanted. It will be a very acceptable piece of equipment to women who have frequent need to wash out clothing, but do not care to utilize general basement facilities for hanging the clothes, or only wish to dry a few pieces so that it is not worth while to make a trip to the basement.

This drier is attached to the ceiling and lowered to hang the clothes. When the clothes are in place it is again raised to the ceiling where it is entirely out of the way while the clothes are drying. It is made in five styles; all wood, natural finish; 1½ inch wood outside frame, aluminum corners, six galvanized lines; all aluminum; ¾ inch steel, white enameled outside frame with six galvanized wires; and 1½ inch wood outside frame with sash cord.

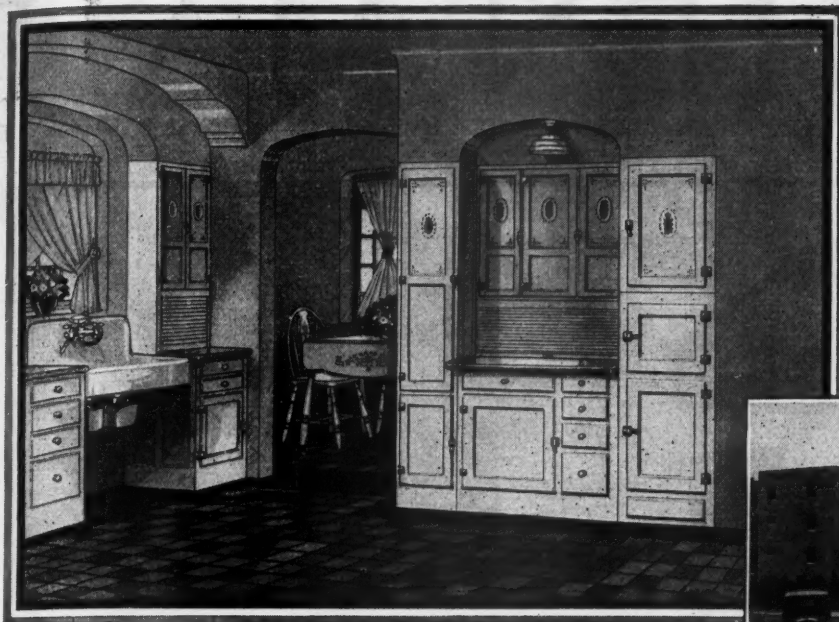


**Even in the Smallest Apartment Kitchen This Clothes Drier Can Be Used with No Inconvenience.**



**This Electric Range Can Be Connected to Any Convenience Outlet and Is a Suitable Piece of Equipment for Either New Buildings or Modernizing Jobs.**

**SPECIALTIES for Quick Sales and PROFITS**



*Beverly Court Apartments,  
Pittsburgh. Nicholas P. Jor-  
dano, Architect-Owner*



## Are You in Tune with Changing Times?

**K**EEP out of the rut. The complacent business man has no place in this age of rapid improvement. Manufacturer—builder—realtor—all must keep abreast of progress if they expect to stay in business. Millwork was fine for the kitchen ten years ago. But what was good ten years ago is obsolete today.

Sellers Kitchen Furniture Units are in step with the changing times. They have brought new style—new beauty—new convenience to new homes and apartments. They are more compact—with many built-in labor-saving features that appeal to the alert women of today.

And this fine furniture built entirely of hardwood costs no more than ordinary millwork. Quantity production and modern manufacturing methods enable us to supply real furniture at surprisingly low prices.



*Home of Mr. L. W. West, Esq.,  
Rochester, N. Y. Architect: E. L.  
Phillips. Builders: J. H. Cairns and  
F. R. Peterson*

Millions of combinations are possible with the 54 Sellers Kitchen Furniture Units. With them, the largest or smallest kitchen can be instantly and permanently equipped without extra millwork. Sellers units come ready to set in place—beautifully enameled in Jade Green, Colonial Ivory, Sellers Gray or Satin White.

During 1929, the back covers of leading magazines are telling millions about Sellers Kitchen Furniture Units. To assure homes that rent quickly or sell easily, equip with this modern, nationally advertised Kitchen Furniture.

Write for detailed information and address of nearest agency.



*Columbus, Ohio. Architect: S. A. S. Zioli. Con-  
tractor: George M. Young*

**G. I. SELLERS & SONS CO.,**

Department 140  
Elwood, Indiana

# SELLERS

KITCHEN FURNITURE UNITS





SPECIALTIES for Quick Sales and PROFITS

# KITCHEN MAID

STANDARD KITCHEN UNITS



## FEATURES...

that give a kitchen *powerful selling appeal*

You can count on a kitchen to do a real part of your selling job when Kitchen Maid Units are on the scene. New features give these units even greater appeal than before.

**Color . . .** the new Kitchen Maid Units are available in choice of five attractive enamel finishes—Pastel Green, Cactus Green, Travertine Ivory, Dove Gray, Shasta White.

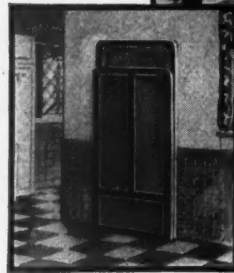
**Sanitation . . .** all inside corners are rounded; doors are smooth-surfaced; drawer interiors are of spotless enamel; hinges are concealed; catches, strikes and inside hardware are rust-proof; drawer pulls are of opalescent glass.

**Variety and flexibility . . .** the Kitchen Maid line includes units covering every kitchen need, in sizes fitting the requirement of every kitchen you build. Each unit is complete in itself—it may be used alone or in a unit combination—installed in recess or set against the wall.

**Plan kitchens that will more than meet your prospects' ideals. Write for Kitchen Maid catalogue, dimensional drawings and prices.**

WASMUTH-ENDICOTT COMPANY, 1304 Snowden St., Andrews, Ind.

*Right: the Dinofold ready to serve four people. Sturdy, rigid, charming in appearance. There is a color combination to harmonize with any kitchen color scheme.*



*Above: the Dinofold—folded up and out of the way in an instant. May be used on wall, door, or in wall recess.*

# WHAT'S NEW for the LIVING ROOMS *These Specialties Attract~*

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

## Mail Box, House Number and Light

**A**N inside mail box, a house number and a porch light are here combined in a single fixture that is attractive in appearance, substantial in construction and priced at a figure which makes it available for installation in any home, new or old. The face of this combination fixture measures 11 by 7¾ inches. The design is classical and all parts are cast in solid bronze. The finish is in old iron, verde antique or natural bronze and will not rust.

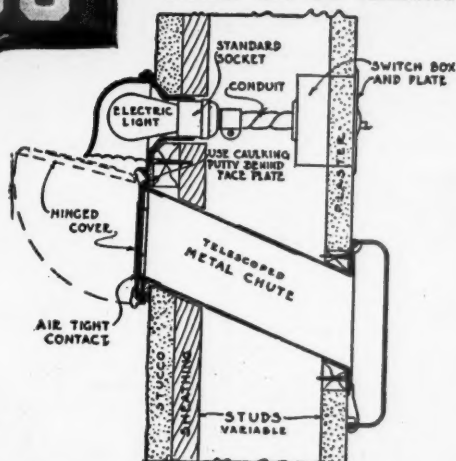


There is a removable hood at the top, over the light, which makes the replacement of bulbs simple. The house numbers are of white, raised, porcelain enamel and are cemented on the number plate. They are 2½ inches high and are visible at a distance of 60 feet, day or night. A doctor or professional man can place a name plate of suitable design directly below the house number. The hooded light uses a standard 10-watt bulb

which makes the number plainly visible at night and also affords a soft lighting for the porch and steps which lessens the danger of a fall on icy steps in winter.

When the postman lifts the outside plate to deliver mail he finds a chute opening large enough to receive the largest letter, magazine or newspaper. The cover then drops into position making the opening draft-proof, as the opening has a raised edge that fits snugly against the outer plate cover.

Inside the house the mail drops from the chute, which is placed at a sharp angle to insure complete delivery, into a wire basket of satin silver finish, with welded joints and held by a strong chain. The chute is painted inside and out and is made of 26 gauge, galvanized iron, in two parts with telescope to fit the wall thickness. It is riveted to inside and outside, cast bronze plates. The light is controlled from a snap-switch placed just above the receiving basket.



Above Is Shown the Outside Plate, Below the Construction, of This Combination Mail Box.

## Ash Dump Improves Fireplace

**T**HE ash-dumps illustrated here are iron trap-doors closing the ash-pit and excluding dust and odor from living rooms. They are a part of every well-equipped fireplace.

Automatic ash-dump closes itself after ashes have been dropped through it, and the common ash-dump is opened and closed by a poker. The shutters cannot come loose or fall in the ash-pit. The automatic dump measures 5 by 7 inches; and the common dump is 5 by 8 inches.



An Ash Dump for the Fireplace Which May Be Either Automatic or Hand Operated.

## Ornamented Wood Mouldings

**M**OULDINGS of ornamental wood, not composition or plaster, are now being produced by methods which make them available for all, and give to every job the depth and beauty of hand carving. The price is low enough to make them available for the average home where hand carved mouldings are too costly. They are also suitable for elaborate decorations, as in theaters, public buildings, hotels, etc., and in lobbies and stores.

These mouldings are authentic in design, architecturally correct. They were all designed by an architect of recognized standing and can be specified with confidence of their authenticity, it is stated. The wood used in their manufacture is scientifically air dried and kiln dried, assuring the production of perfect mouldings. They will not chip or crack. They can be finished in white, in color or to match any wood. They are carried in stock in poplar and red gum—the poplar being suitable for white or color work and the gum for either walnut or mahogany finish. They may also be obtained to order, in genuine maple, walnut, oak or mahogany. They are easy and economical to erect, being supplied in lengths of 6 to 16 feet.



Mouldings of Wood in an Infinite Variety of Designs at Moderate Cost.

For buildings where fireproof materials are required these mouldings can be supplied in a wood which has been treated, by this manufacturer's own process, to make it fireproof. This treated wood can be finished like any ordinary wood and will keep its finish as long. An almost infinite variety of designs and combinations are possible and special designs may be obtained at special prices.



# Fenestra

*announces a new*



Screens are easily removed.



Fenestra Casements are easily opened and closed by sill operators working through the screens.

# Fenestra SCREENCASE

# SCREEN

## *casement window*

*The most outstanding improvement since  
the inception of steel casement windows*

Now, for the first time, you can get steel casements *complete with screens*,—all through *one* manufacturer.

Fenestra,— the only casement in which non-warping, metal-to-metal contact is permanently assured between *flat screen frame* and *flat window frame*.

Screens *need not be touched* in any way when opening or closing the windows but can be removed in a jiffy without effort. Swing leaves are opened or closed entirely by sill operators working *through* the screen, thus avoiding the necessity of leaning out.

Screens are designed to cover only the actual ventilating opening, leaving the glass in side-lights and transoms clear.

Standard sizes make *only two* types of screen necessary: (a) single leaf type, supplied in one-light or two-light widths and in two-light, three-light, or four-light heights. (b) Double leaf type, supplied in four-light widths and two-light, three-light, and four-light heights.

Screens need not be numbered or marked

if removed for storage. Any window will accommodate a screen from any other window having the same sized swing leaf with locking handle on the same side.

Flat gray priming coat of paint baked on the screen frame forms an ideal base for finish coat in harmony with the decorative scheme of any room.

Cost is surprisingly low — no more than you would pay for any other good window complete with screen.

These exclusive features add to the many advantages which have popularized Fenestra Casements for years: extra daylight; better ventilation; one-hundred per cent opening if desired; finger touch operation without swelling, sticking, warping or shrinking; strong fire-resisting steel members; extension hinges that make outside washing easy from within the room.

For complete information call "Fenestra Steel Window Company" in your own city or write to America's oldest and largest makers of steel windows.

DETROIT STEEL PRODUCTS COMPANY, 2281 EAST GRAND BOULEVARD, DETROIT

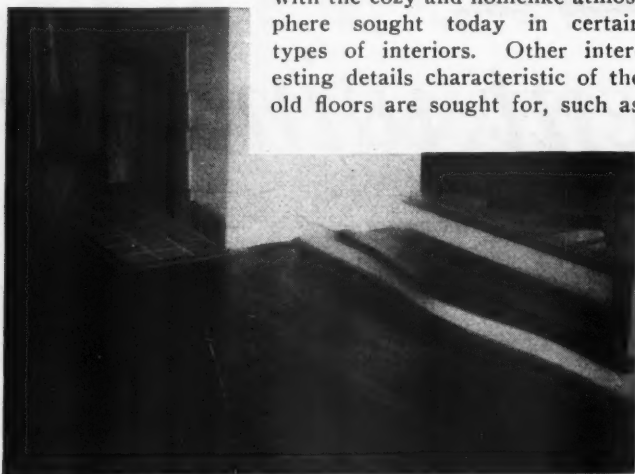
Factories: Detroit, Michigan and Oakland, California. Convenient Warehouse Stocks.

# CASEMENT WINDOWS



### Random Width Plank Floors

**I**N floors, wide boards of solid oak are characteristic of Renaissance Italy, France and Spain, Elizabethan England and Colonial America, and in most cases were laid in what is known as random-width style. Such a floor has an "accidental" air combined with dignity quite in keeping with the cozy and homelike atmosphere sought today in certain types of interiors. Other interesting details characteristic of the old floors are sought for, such as



**A Solid Oak Plank Floor of the Modern Type Which Is Protected Against the Effects of Moisture.**

knots, unevenness of the surface, to a certain extent, and the effect of cracks between the boards, brought about by a "V" shaped groove which accentuates each board in the floor.

In addition to improvements in the manufacture of the modern plank floor, which have reduced its cost, each plank is now being treated, by one manufacturer, to make it more resistant to moisture conditions. This process adds but little to the cost and reduces the tendency to change in shape. While old type plank floors were very uneven, the present tendency is for a smoother surface and this treatment tends to maintain a more level solid plank floor.



### Modern Built-In Mail Receiver

**T**HE built-in mail box has now become a real necessity to complete the modern home. There was a day when the familiar ring of the postman forced the housewife to leave her work or cut short her telephone conversation, or whatever else she was doing, to run to the door for the mail. There was also the annoyance of finding the morning paper rain soaked and torn or even scattered, by the wind, all over the neighborhood.



**The Built-In Mail Box Is an Essential Item in the Modern Home.**

Then came the locked box outside the front door. It did not compel the housewife to drop everything to answer the mail carrier's ring, but it was often disagreeable to go out in bad weather for the mail and let the cold winter blast into the house. Lost keys, rusted locks, pilfered mail were added annoyances. The modern mail receiver con-

sists of a strong, cast bronze door, in attractive dull finish, on the outside to admit letters, papers, magazines, a neat door on the inside of the house and a chute connecting the two. With such a box there are no more drafts, no scattered mail or rain soaked papers, no interruptions and no going outside in bad weather. There is no key to get lost or lock to get rusty.

These receivers are made in various sizes to meet varying construction requirements and they are easily installed in either frame or masonry construction.



### Modern Telephone Equipment

**I**T is needless to say that the modern family desires a modern home, so arranged and so fitted as to provide a maximum of labor-saving and time-saving equipment. Telephone arrangements in the home play an important part in social and domestic life and should be comparable, as to comfort, convenience and efficiency, with the other appointments to which the occupants are accustomed.

Arrangements for homes generally include at least one telephone to serve the living quarters and one in or near the kitchen, for convenience in promptly answering incoming calls and in conducting the household affairs. Additional telephones are desirable in sleeping quarters, including each regularly occupied bedroom and guest room. Telephones should also be readily available to servants' quarters and in the basement in cases where there is a billiard room or workshop downstairs.

In many cases intercommunication between telephones on the premises is also desirable. Some of these needs can be met by portable telephones which the telephone company supplies with a plug so that they can be plugged in wherever suitable outlets are provided. To obtain the best results, the house should be provided with conduit when built, with outlets at all points where telephones may, in the future, be desired. This obviously results in general, overall improvement of the residence as regards appearance, flexibility in making changes and additions to the service, and also provides additional protection to the wires and apparatus, insuring more fully against possible interruption of service. A very complete book on home telephone equipment is available to those responsible for planning residences.



### Hold Sales Convention

**T**HE Clay Products Co., Inc., Brazil, Ind., held its annual sales convention February 11 to 13, 1929. More than 50 sales representatives from all parts of the country were present. The business sessions were held at the general offices of the company in Brazil.



**Portable Telephones Can Be Plugged in Wherever Suitable Outlets Are Provided.**

## SPECIALTIES for Quick Sales and PROFITS



**“92%  
of All Houses  
Are Bought  
On the Word of  
A Woman”**

**I**F you are building to sell or rent, don't forget that if you please the woman the sale is more than half made. Women, today, respond to color as never before. Take advantage of this color-mindedness by including beautiful floors of W. & J. Sloane Linoleum in your plans. Mention, too, that it is W. & J. Sloane Linoleum. Women know these floors are outstanding in color and style. W. & J. Sloane Mfg. Co., Trenton, N. J.

**W. & J. SLOANE  
LINOLEUM**

### *Special Service For Contractors*

As selling agents for W. & J. Sloane Linoleum, we give practical cooperation to investment builders. This includes the selection of suitable grades and patterns for specified rooms, the preparation of laying specifications, securing of estimates, etc. This service extends also to advice on harmonizing color schemes for model homes. This cooperation is without charge. Merely write your problem to: Contractors Service Division, W. & J. Sloane, 577 Fifth Ave., New York City.



### Steel Casement Windows Are Screen Equipped

**A**N outstanding improvement in steel casement windows has been announced by one of the oldest and largest steel window manufacturers. It is called a "screen casement" (not "screened" for reasons which will appear later) and it answers what has been in the past one of the greatest objections to swing out casements.

Most casements are made with leaves that swing outward to insure positive weathering against driving storms and this feature necessitates screens on the inside. Heretofore inside screens could not be purchased through the casement makers but had to be bought independently from screen manufacturers and installed by the building contractor entirely separate from the casements themselves.

Screen installation necessitated various special details. The screen had to be kept back about  $2\frac{1}{8}$  inches from the window to clear the hardware. It had to have a special screen stop, at head and jambs. Sometimes track or hinges or rollers had to be provided. And, except where special underscreen operators were employed, the screens invariably had to be moved to open or close the casement windows. The new window does away with all these objections, it is stated.

In general appearance, construction, glass sizes, overall dimensions and installation details, the new equipment is identical with the stock casement put on the market by this manufacturer during the past few years. The only essential differences lie in the locking handle, the sill operator and in the addition of the screen.

The locking handle is attached to the frame of the window instead of to the swing leaf. Only one handle is used whether the casement has but one swing leaf or two adjacent swing leaves. Turning the handle operates a beveled plate which engages a cam bracket on the swing leaf when the latter is closed, thus drawing the leaf tight shut. The sill operator is of the thumb screw type and



The Screen Is Held in Place by Clips Which Permit It to Be Quickly and Easily Removed When Desired.



Both the Locking Handle and the Sill Operator Extend Through the Screen and the Casement Is Operated Without Moving the Screen.

is designed to provide easy operating movement either in or out and to close the swing leaf with a clamping action. When the screen is in place, the sill operator does its work through the screen, so that the latter need not be moved in any way.

The screen itself is designed to fit flat against the window frame with the casement locking handle and the sill operator protruding through the screen so that both may be manipulated from the inside. A slot in the bottom rail of the screen frame fits over the operator arm and an escutcheon with a circular hole fits over and around the locking handle.

The screen frame is made of cold rolled strip steel, with corners mitered and reinforced by braces sweated in. The entire screen frame is reinforced along the full length of each stile and rail. Screen cloth is of bronze wire held by a specially formed interlocking cap which is removable for rewiring. Small spring clips attached at the top of the casement frame just above the swing leaf, hold the screen in place and permit its speedy and easy removal when desired.

The major advantages of the new equipment, according to the manufacturer are these:

It provides the only casement in which non-warping, metal-to-metal contact is permanently assured between a flat screen frame and a flat window frame.

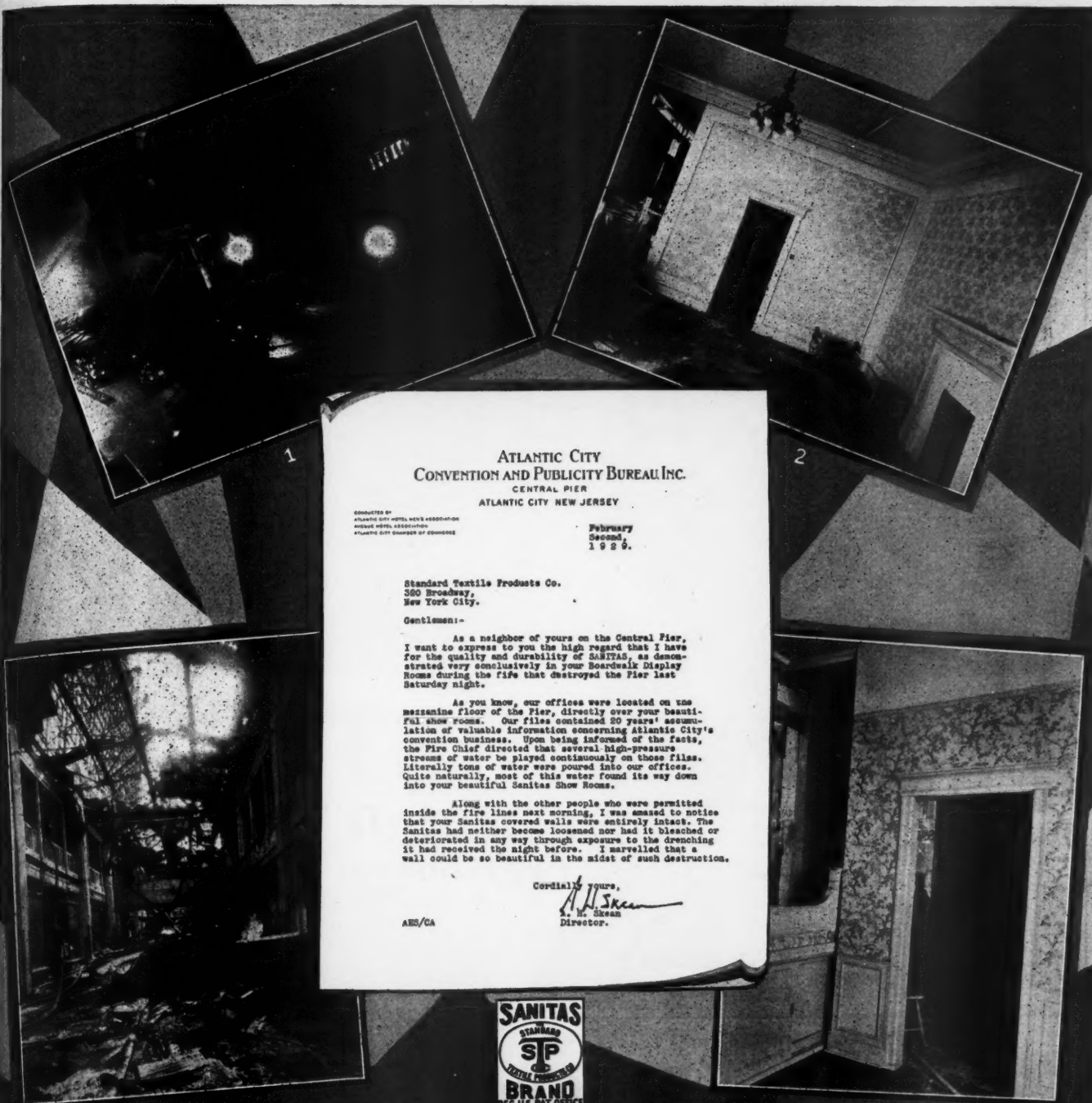
Since the swing leaves are operated entirely by the sill hardware, and since the locking handle is attached to the frame there is no necessity for leaning out even when the screen has been removed.

The screens need not be touched or moved in any way in opening or closing the window, yet may be removed or replaced in a few seconds, and without effort.

Screens are designed to cover only the actual ventilating opening. This leaves side lights or transoms clear and at the same time reduces the cost of screening as compared to former inside screens which usually covered the entire window opening.

Being thoroughly standardized, screens do not need to be marked or numbered when removed from the windows for storage. Any window will accommodate a screen from any other window of the same size and style.

# SPECIALTIES for Quick Sales and PROFITS



## ATLANTIC CITY CONVENTION AND PUBLICITY BUREAU INC. CENTRAL PIER ATLANTIC CITY NEW JERSEY

CONDUCTED BY  
ATLANTIC CITY HOTEL NEWS ASSOCIATION  
ATLANTIC CITY CHAMBER OF COMMERCE

February  
Second,  
1929.

Standard Textile Products Co.  
360 Broadway,  
New York City.

Gentlemen:-

As a neighbor of yours on the Central Pier, I want to express to you the high regard that I have for the quality and durability of SANITAS, as demonstrated very conclusively in your Boardwalk Display Rooms during the fire that destroyed the Pier last Saturday night.

As you know, our offices were located on the mezzanine floor of the Pier, directly over your beautiful show rooms. Our files contained 20 years' accumulation of valuable information concerning Atlantic City's convention business. Upon being informed of the facts, the Fire Chief directed that several high-pressure streams of water be played continuously on those files. Literally tons of water were poured into our offices. Quite naturally, most of this water found its way down into your beautiful Sanitas Show Rooms.

Along with the other people who were permitted inside the fire lines next morning, I was amazed to notice that your Sanitas covered walls were entirely intact. The Sanitas had neither become loosened nor had it bleached or deteriorated in any way through exposure to the drenching it had received the night before. I marvelled that a wall could be so beautiful in the midst of such destruction.

Cordially yours,

*A. H. Skean*  
A. H. Skean  
Director.

AMS/CA



# SANITAS Comes through a big fire

**"I marveled that a wall could be so beautiful in the midst of such destruction"**

READ the letter above which tells how Sanitas came through the fire at Central Pier, Atlantic City, with practically no damage from tons of water.

**Photograph No. 1** shows ten high pressure streams pouring right over the Sanitas display rooms.

**Photograph No. 2** shows one of the Sanitas decorated rooms the day after the fire. Only one of the seams in the ceiling opened, which was easily pasted back.

**Photograph No. 3** shows destruction alongside of the Sanitas display rooms.

**Photograph No. 4** shows Sanitas decorated walls in perfect condition. This is only five feet removed from the havoc illustrated in No. 3.

No other wall covering could retain its original beauty and color under such conditions. We claim that Sanitas is impervious to moisture but we didn't expect it to resist a deluge.

Sanitas is the original cloth wall covering made in styles for every room in the house.

Samples and literature on request.

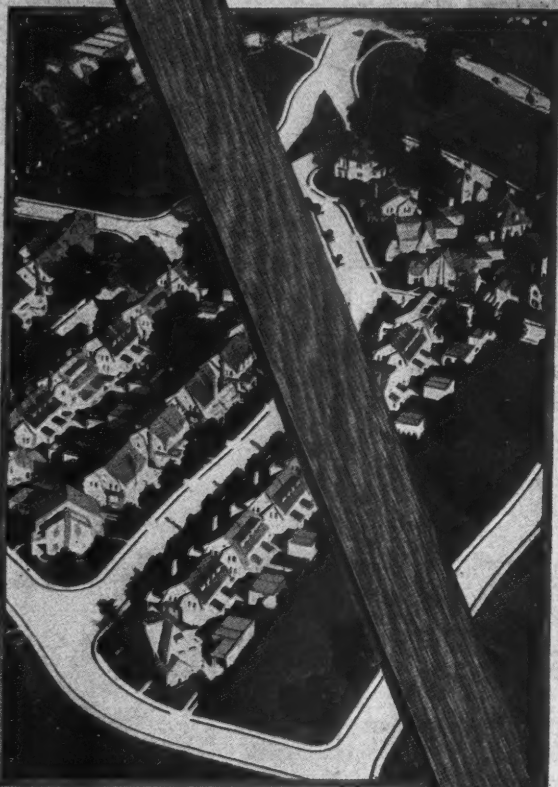
THE STANDARD TEXTILE PRODUCTS CO. 320 Broadway Dept. 51, New York



THE SATURDAY EVENING POST

March 23, 1929

Every single home in Gladstone Manor  
has this revolutionary kind of oak floor



### CROMAR right over your old floors

Because CROMAR is completely finished at the factory, it is laid and used the same day! When the beautifully finished CROMAR strips reach you, *crack!* in compact, easy-to-handle, damage-proof bundles, there is not another thing to do but nail them down—right over your old floors. The complete job (just nailing, remember) is done at the speed of a room a day. Started after breakfast—completed before dinner!

CROMAR is a *snipe-and-groove* flooring—which means that the nails are driven *not* through the surface but through the tongue—and are thus concealed by the groove of the adjoining strip.



THERE'S an attractive new suburb near Philadelphia. W. Percival Johnson conceived it, planned it, built it, and christened it "Gladstone Manor." The beautiful oak floors of every Johnson-built home, upstairs and downstairs, are CROMAR Factory Finished Oak Floors. Just another example of the startling success-story of CROMAR.

In each case, CROMAR Flooring was chosen because it is the only flooring in the world which is *completely finished at the factory* (like furniture) by patented machines—scraped, sanded, filled, twice-varnished and treated to resist moisture. Our of this one fundamental and exclusive feature grow all the other CROMAR advantages over hand-finished flooring.

The most outstanding of these advantages are: 1. A more uniformly beautiful Finish—2. A longer-lasting Finish—3. Treated to resist Moisture—4. Lower Upkeep cost—5. Far greater speed and convenience of installing—6. Considerably quicker sale or rental of property.

And yet, CROMAR floors cost no more than hand-finished oak floors!

Write for a free sample and booklet which explain these advantages in full detail and describe all other exclusive CROMAR features. CROMAR is sold by lumber dealers, but carpenters and contractors install it. Consult any of these for further information. If you have the slightest trouble in getting satisfaction, write us and we shall give your inquiry immediate personal attention.

THE CROMAR COMPANY, WILLIAMSPORT, PA.

Pacific Greater West Distributors:  
THE C. L. THOMPSON COMPANY  
Offices and Warehouses:  
200 Davis Street, San Francisco, California  
324 N. San Pedro St., Los Angeles, California

**CROMAR**  
FACTORY FINISHED  
**Oak FLOORING**

## When you lay CROMAR OAK FLOORS

you are entirely independent of professional floor-layers—your own carpenters do the work and you make the profit on them.

CROMAR Flooring strips are Appalachian oak completely finished at the CROMAR factory. Powerful and ingenious machines scrape, sand, fill, and double varnish each strip—thoroughly, beautifully, and without varying quality. The strips are then treated to resist moisture, graded, sorted for length, and crated.



Write for free samples and complete literature concerning the manufacture, the selling and laying of the only Factory Finished hardwood flooring in the world.

**CROMAR**  
FACTORY FINISHED  
**Oak FLOORING**

Nailing—that's all there is to do when you lay a CROMAR Oak Floor. And that means SPEED. Even the nailing is simplified. Nail holes are punched in the tongue, and the flat, beveled tongue makes "setting" unnecessary and prevents damaged edges. That same V-type tongue-and-groove forms a flexible joint which absorbs unevenness in the sub-floor—and makes a quick, snug fit.

A small, new house can be got ready for occupancy 2 weeks earlier when you lay CROMAR.

THE CROMAR COMPANY, WILLIAMSPORT PA.

Pacific Greater West Distributor  
THE C. L. THOMPSON COMPANY

Offices and Warehouses  
200 Davis Street, San Francisco, California  
324 N. San Pedro Street, Los Angeles, California

This is a reproduction of the CROMAR Ad on page 128 in the March 23 issue of The Saturday Evening Post.

**SPECIALTIES for Quick Sales and PROFITS**

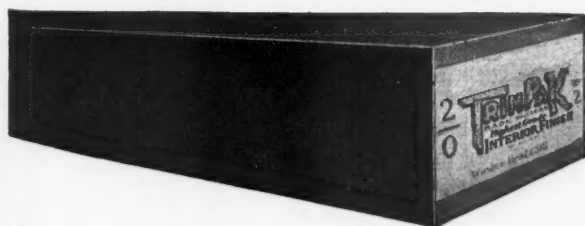
# The Nation's Standard Door and Window Trim

From Maine to Texas  
From Washington to Florida



## TRIMPAK

Interior Trim, Assembled, In Sealed Cartons



Have you made this great discovery yet?—a discovery that has saved money for thousands of builders? For it is great to discover a new way to do a job, a way to do it better and at less cost.

That is what TrimPak does. This remarkable interior trim for doors and windows saves actual

dollars in erection costs; and its constant high quality is rigidly maintained, year in and year out.

The smooth, clear surfaces of TrimPak are fully protected from dirt and damage from the mill to the job. The pieces remain untouched until the carpenter breaks the seals. Delays in construction, due to shortage or damage when ordinary trim is used, are avoided when TrimPak is used. Two cartons contain the complete trim for a door or a window. Each piece is cut to approximate length for fitting.

For full information as to how TrimPak is saving money for builders, use the coupon below, or

*Ask your Lumber Dealer*

44 Whitehall Street  
New York, N. Y.

**TRIMPAK CORPORATION**

19 S. La Salle Street  
Chicago, Ill.

*The only Lumber  
Product with a  
National Distribution*

Copyright 1929, TrimPak Corporation

TRIMPAK CORPORATION, 44 Whitehall Street, New York, N. Y.

AB-4

Please send complete information on TrimPak, and the story of properly-dried lumber.

Name \_\_\_\_\_

Address \_\_\_\_\_

Please check the square that identifies you, so we may reply most intelligently:

☐ Architect

☐ Builder

☐ Contractor

☐ Retail Lumber Dealer

☐ Home Builder



# WHAT'S NEW

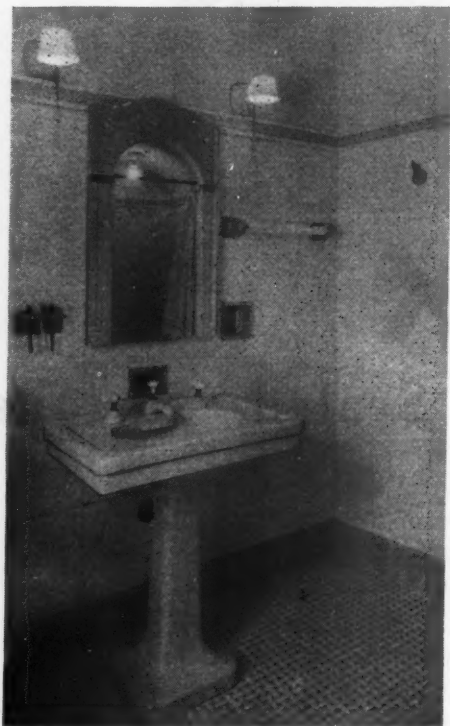
## for BED-ROOM and BATH

### Specialties of Greater Sales Value

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

#### A Ceramic Wall Material

**T**HIS bathroom is finished with a ceramic material made of rocks, silica, metals and other mineral elements melted under tremendous heat, rolled into slabs of various thicknesses and then subjected to additional processes during which it reaches a degree of hardness and density said to be for greater than that of marble and combining the desirable qualities of glass and porcelain.



Floors, Walls and Ceilings May Be Made Beautiful with This Colorful Material.

In the process of manufacture this material acquires a fire-polished surface of such durability that it will never deteriorate in any way or show signs of use even after years of service, it is said. It will resist damage from cleaning, scratching or scraping and will never develop surface cracks or crazing nor become unsightly from stains or discoloration.

This material is exceptionally easy to clean. This is, primarily, because no soiling substance can penetrate its hard, lustrous surface, while dust has almost no change to collect or secure a foothold. It may be soiled with dirt, oils or greases so as to be almost unrecognizable, but a damp cloth is usually sufficient to restore its spotlessness.

It is available in a variety of colors, including white, ivory, orchid gray, jade, dark green, blue and black, with additional colors being developed. It offers a wide range in size of pieces so that walls can be designed with reference to good proportions between base, trim, borders and field. An infinite variety of designs in colored ornament, applied by a special process, may be used to give a rich effect and to carry out any style of color scheme.



#### Ventilating Door Panels

**D**OOR panels with ventilating louvers, such as may be seen in the accompanying illustration, can be installed

at less cost than the old style of transom, according to figures compiled by the manufacturers, and offer a number of advantages over the old style transom. Their use makes possible cross ventilation even in hotel and similar rooms where there is only one outside wall.

These panels are made with both movable and stationary louvers. The stationary louver panels may be installed either right side up or upside down, according to where they are placed. They are especially recommended for infirmaries, institutions, hospital wards, attics, linen closets, pantries, for ventilating inside rooms from air shafts, for toilets and bed closets.

The panels with movable louvers are made in three styles. Two of these styles are the same except that one is equipped with a knob cam, positive in operation, locking the louvers either open or closed, while the other is equipped with a slide knurl adjustment similar to that used on the third style of panel. These panels, as well as the stationary panels, are one inch thick. They are manufactured in one complete unit, ready for installation when shipped.

The doors in which they are to be installed are made with an opening  $\frac{1}{8}$  inch larger, each way, than the panel to be used. They are equipped with moulding on the inside and outside of the opening. The outside moulding is permanent. The inside moulding is fastened with brads and, to install the panel, this moulding is removed, the panel inserted in the opening and the moulding replaced.

The third type of panel is made in two units with the louvers attached to the inside frame. The outside frame is a finishing trim only. Both frames are fastened to the door by nails. These panels are made according to the thickness of the door  $1\frac{3}{8}$  inches or  $1\frac{3}{4}$  inches thick. They are most satisfactory when it is necessary to cover up, with the frame, any irregularities in the openings in the doors.

Any of these panels may be installed in either wood or steel doors, in any transom space or in walls in old or new buildings. They are finished in high grade, baked enamel in solid colors. The standard finishes are: oak, mahogany, walnut and olive green, in shades to match the color of doors. Special finishes are furnished to match samples.



Ventilating Panels in Doors Eliminate Transoms and Permit the Economy of Lower Ceilings as Well as Other Advantages.

# The Bath of the Future

## The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented

Semi-Vitreous Porcelain and Enameled Iron Ware

### Its Advantages:

A Seat, Foot, Shower and Child's Bath, all in one.  
Comfortable because the bather assumes a sitting position.  
Easy operation of valves.  
No grip rails needed.  
Saves space. Size of Bath Tub, 44x30 inches. For tiling in recess or corner of room.

Write Us for Descriptive Booklet Giving Measurements and Other Details and Testimonials

TELEPHONE MOHAWK 3102

KITCHENETTE APARTMENTS



May 28, 1928

Wheeling Sanitary Mfg. Co.,  
Wheeling, West Virginia.

Dear Sirs:

Referring to your request that, if I could consistently do so, I give you a testimonial having special reference to the 84 Combination Baths, and incidentally the other bathroom fixtures, including vitreous china lavatories and water closet bowls of your manufacture, installed in the Lincoln Park Arms Hotel nearly a year ago, and of which I am the Manager.

On the whole, we are delighted with our bathroom equipment, especially the Combination Baths. They have proven a favorable factor to the management in the conduct of the Hotel. This is evidenced and supported by their general approval on the part of our guests.

Therefore, I can recommend the Combination Baths without stint or reservation of any kind. Furthermore, I shall be glad to have you send any persons here who may be interested and wish to inspect the baths.

I trust this meets with your approval.

Yours very truly,

*Walter J. Jaffer, Owner*  
*Montgomery*  
*Mrs.*



PLATE 11-E  
Enamelled Iron Ware, 44x30 inches to tile in right or left hand corner. Enamelled white all exposed parts. Same as Plate 10-E except for corner installation.



PLATE 10-E  
Enamelled Iron Ware, 44x30 inches to tile in recess, only. Enamelled white front. Waste in foot section either right or left hand end.



**100%**

**Wheeling Sanitary Mfg. Co.'s  
Installations**



Plate 125-E "The Tranquil" all white Syphon Jet Water Closet Combination.

We manufacture a complete line of Plumbing Fixtures of Vitreous China, Enameled Iron, Semi-Vitreous Porcelain, comprising Water Closet Bowls and Flush Tanks, Lavatories, Regular Bath Tubs, Kitchen Sinks, Laundry Trays, Urinal Stalls, etc.

**WHEELING SANITARY MFG. CO.**  
**WHEELING, W. VA.**

**Manufacturers of High Grade Plumbing Fixtures**

Sold by Leading Jobbers of Plumbing Supplies

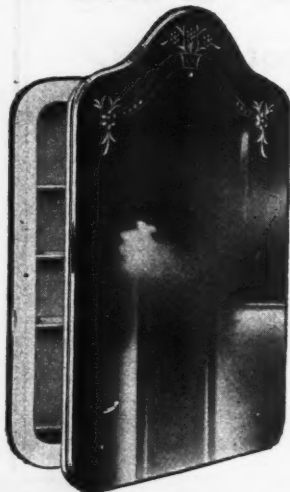


Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.



### One Piece Steel Cabinets

**T**HE one-piece steel bathroom cabinet illustrated has a number of distinctive features which recommend it. It is made in a number of styles and sizes, including Venetian mirror door types. The cabinet doors and the entire cabinet body are drawn from one continuous piece of steel from which seams, cracks, dirt, rust and corrosion are eliminated. There are no welded joints whatever.



**This New Line of Bathroom Cabinet Includes Venetian Mirror Door Models.**

Round corners, both inside and outside correspond with the contours of all other bathroom fixtures. They are more sanitary, easier to clean and keep clean. They have continuous piano type door hinge of brass heavily nickel-plated which will not sag or warp. Bulb edge glass shelves are notched in ends so that they cannot slip forward or out of cabinet, yet they can be easily removed for cleaning. Only this special cabinet has this original feature, it is claimed. Three heavy bulb edge glass shelves are furnished with each cabinet.

The shelf supports are of brass heavily nickeled and secured to the cabinet by special type screws secured by special lock washers. The heavy brass spring catch cannot fail in action. The door catch knob is also nickeled, designed to cushion door action. An ample depression for opening cabinet door.

A nickel plated combination chain with heavy spring door stop permits the door to open 90 degrees and prevents mirror breakage against abutting wall. There are four heavily polished nickel plated bolts and nuts for attaching mirrors to doors.

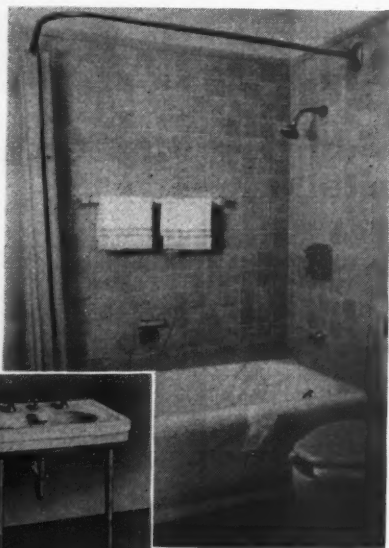


### Distinctive Bathroom Fixtures

**A** COMPLETE new line of distinctive octachrome fittings for baths, showers, lavatories and sinks, com-

plimenting a well-known line of colorware, has just been announced. These chromium-plated fittings, octagonal in motif, reflect the modern note in architecture and decorating and add lustrous finishing touches to a modern bathroom in colors.

Of first importance are the durability and permanence of the beautiful chromium plating. Chromium has astonishing wearing qualities, far outlast-



**Beauty of Design and High Quality of Construction Are Evident in These Bathroom Fittings.**

ing nickel. Its durability is equal to the severe demands of hard everyday usage and it has great ability to withstand all ordinary damage.

Moreover, chromium is highly resistant to fruit and vegetable acids, gases, salt air and other elements which dull and discolor most other metals and finishes. The plating also is non-rusting and non-corroding and is almost completely non-tarnishing. Occasional washing and wiping will keep it clean and lustrous and its patinum-like finish will remain bright with comparatively little attention.

From the point of utility, this new line has all the features of efficiency and long life embodied in all this company's brass. All valves are made with renewable seats and enclosed and swivel disc washers are easily replaceable, as are all other wearing parts. The lift rod, with its patented springball adjustment, provides an efficient and easily controlled drain for lavatories. The faucets have a new anti-splash device, which causes water to run from them in a smooth, even stream.



### Ventilators Built Into Doors

**T**HE following advantages of the door illustrated here are pointed out by the manufacturers of these units.

Two collapsible hinges permit the top panel or sash of a door to tilt open to provide ventilation. These hinges also close the space between the open sash or panel and the stiles. There is a lock which can be opened from the room side of the door only, and by a pull on the pendant handle. An automatic closer closes the ventilating panel when the door is opened and forces the ventilating panel open when the door is re-closed.

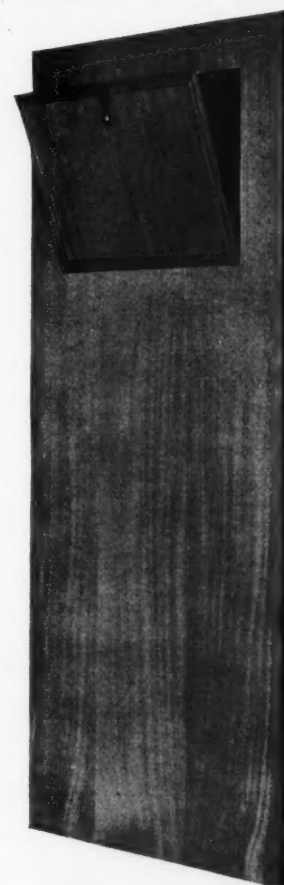
From the corridor side, these ventilating doors have the appearance of a slab door with one opening moulded, or a two-panel door with flush moulding. There are no slats or bars to catch dirt. The top panel is 1 3/4 inches thick.

Ventilation is provided in the same manner as the old style transoms with the added efficiency resulting from the opening at the side of the ventilating panel being closed to form a flue. Placing the transom in the door saves the wall space formerly used.

The door manufacturers make a two-panel door and install the unit, consisting of two hinges, a lock and an automatic closer at their factory. This is an advantage to the contractor, in that installation is made at the door factory, which relieves him of responsibility and expense.

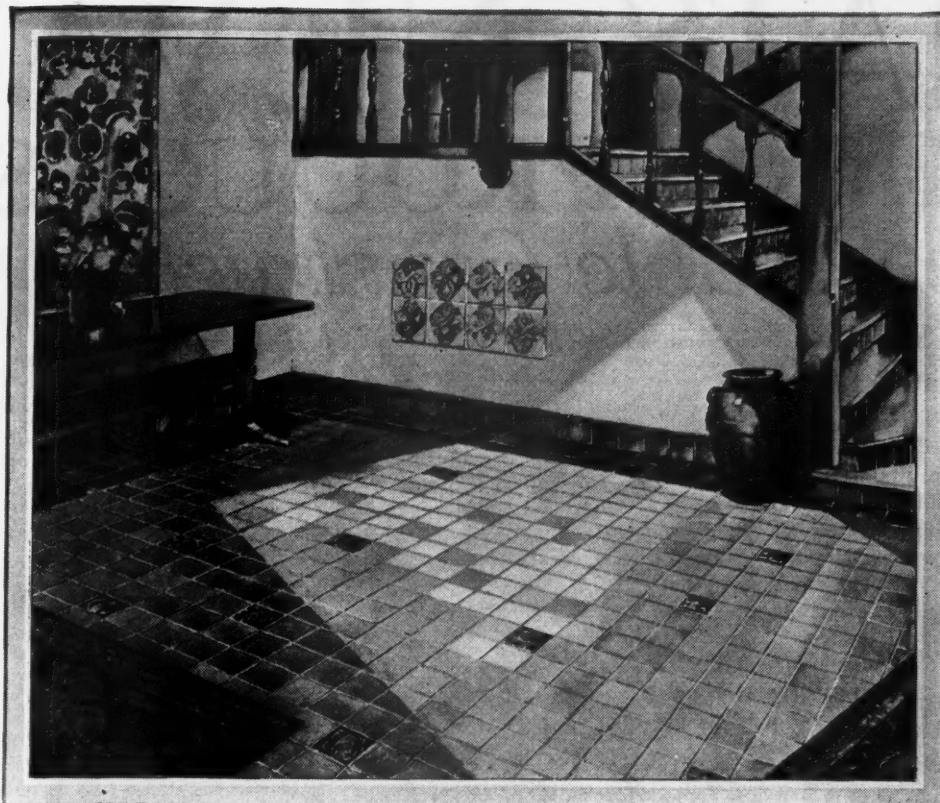


**T**HE American Radiator Co., 40 W. 40th St., New York City, N. Y., has announced the promotion of Mr. W. M. Cosgrove and Mr. D. E. Kennedy to vice-president; George Maier and Richard B. Mayer to assistant general manager; Robert E. Daly, Denning Miller and John J. Ney to assistant general manager of sales.



**This Complete Ventilator, Built Into the Door at the Factory, Is Highly Efficient.**

## SPECIALTIES for Quick Sales and PROFITS



**YOU DERIVE** the greatest benefit from Ceramic Tiles when the tiles are set by experts. Their skilled workmanship is instantly apparent. Select your tiling contractor on the quality of his work.



# Houses Sell Faster when More Rooms are Finished in Tile

**YOU** know that a bathroom finished with Ceramic Tiles—real tiles—is a big selling point for a house. But the bathroom is just a beginning. Today many builders are using this decorative building material in other rooms to sell their offerings faster and for more money.

The kitchen, sun porch, dining room, vestibule are all interiors where the cheerful coloring and distinctive patterns of Ceramic Tiles can add to the attractiveness of your dwellings.

Put tiles to work for you in this way. You can add a colorful charm to your houses which wins the instant approval of buyers. You can immediately impress them with the fact that you are offering them homes with good construction throughout. Ceramic Tiles will lift your offering out of the ordinary class of dwellings,

and often be the deciding factor in making a quick profitable sale.

Call in your tiling contractor on the next house you build. Let him discuss with you the many ways in which this permanently beautiful material can be used to increase the saleability of your offerings.

## ASSOCIATED TILE MANUFACTURERS

420 Lexington Ave., New York, N. Y.

ALHAMBRA TILE CO.  
AMERICAN ENCAUSTIC TILING CO., Ltd.  
CAMBRIDGE TILE MANUFACTURING CO.  
FEDERAL TILE COMPANY  
FRANKLIN POTTERY  
GRUEBY FAIENCE & TILE CO.

MATAWAN TILE CO.  
THE MOSAIC TILE CO.  
NATIONAL TILE CO.  
OLEAN TILE CO.  
THE C. PARDEE WORKS  
ROSSMAN CORPORATION

STANDARD TILE CO.  
THE SPARTA CERAMIC CO.  
UNITED STATES ENCAUSTIC TILE WORKS  
UNITED STATES QUARRY TILE CO.  
WHEATLEY TILE & POTTERY CO.  
WHEELING TILE CO.

K E R A M I C T I L E S

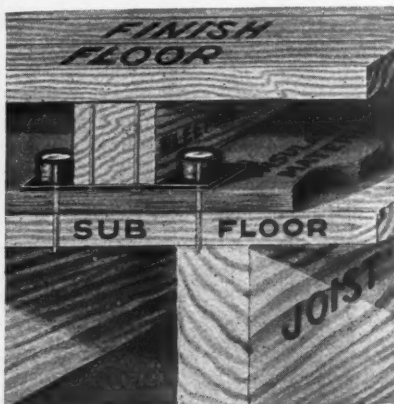


# WHAT'S NEW in BUILDING PRODUCTS for More Salable Construction

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

## Floor Clips Deaden Sound

THE device shown here has been used for deadening sound in the floors of a number of important apartment buildings with most satisfactory results, it is stated. It is a device which "floats" the finished floor on insulating material so that all sound carrying connection between the sub-floor and finished floor is broken. It was developed because of



With This Clip in Use the Finished Floor "Floats" on Insulating Material.

the realization that sound deadening material alone was not sufficient if nails were driven through it without being insulated.

This clip consists of five pieces. The clip proper is a steel plate two inches wide, with two  $\frac{1}{4}$  inch holes in the center and two  $\frac{5}{8}$  inch holes on each end. There are two special nails with each clip to be used in nailing the clip to the sleeper. The

special washer nails are furnished to nail the attached clip and sleeper to the rough floor.

After the insulating material has been placed on the rough floor, covering all pipes and conduits, the sleepers are laid, having been notched to permit the passage of pipes, etc. The flat metal clips are nailed to the under sides of the sleepers at intervals of approximately 14 inches. The sleepers are then turned over and the special washer nails are driven through the large holes in each clip, through the sound insulating material on the rough floor, until the felt washer comes in contact with the metal strip. The result is that the sleepers are "floating" between the insulating material on the sub-floor and the insulation nails, without metallic contact between the sub-floor and finished floor.

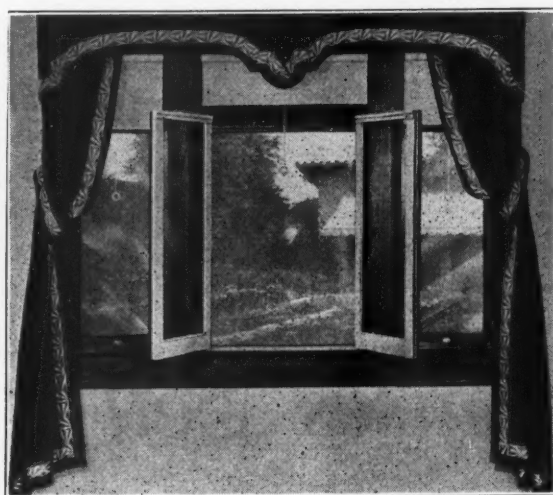


## Windows That Swing and Slide

THE casement window hardware used on the windows illustrated here has been designed to give all the advantages of both the casement window and the sliding sash, with none of the disadvantages of either. These windows are not only inswinging casements, but also slide up and down. Consequently they are made to drop down on the outside of the sill just like an ordinary sliding sash, making it impossible for snow, rain or wind to leak in. They are also weatherproof at every other point.

The channels are built with a special tongue and groove arrangement which seals them completely when the sash is

closed. At the center, where the two casement sash come together, special stripping is provided, making this point weatherproof. In addition, a special tongued strip is provided for the bottom, giving additional protection at this point.



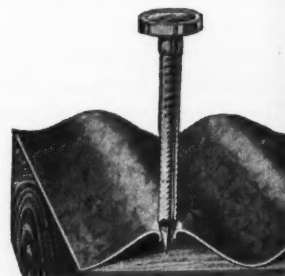
These Windows Are Said to Combine All the Desirable Features of Both Casements and Sliding Sash.

Each casement sash can be either raised or swung and, if swung, may be held at any desired angle by the sash adjusters on the sill. The transom may be lowered, giving top ventilation whether the casement sash are open or closed. This feature makes cleaning from the inside easy.



## Effective Lead-Headed Nails

LEAD-HEADED nails with the lead placed underneath the head of the nail are a specialty which will be found most valuable in applying sheet metal siding and roofing. They are used as a protection against the rust that forms about the edge of nail holes in galvanized sheets and that attacks the nail just under the head at the neck. The object of this nail is to have all the lead under the head so that blows of the hammer hit directly on the steel head, thereby driving the nail tighter in place and avoiding knocking the lead protection out of place or loosening it from the nail. The nails are made in bright finish, galvanized finish and pure copper—all No. 10 gauge—and in three sizes, 1½, 1¾, and 2-inch.



The Lead Is Never Displaced in Driving This Nail and Forms the Only Contact with the Sheet.

# Science brings a super Roof Tile



## and a money-making opportunity in Chain Manufacturing

**F**OR centuries tile has been accredited the finest of all roof materials. Now comes a new development making possible greater beauty, superior quality, marvelous color and lower cost.

Duntex has years of research and experiment behind it. It is perfected, tested and proven. Its rich, permanent colors bring possibilities never before obtainable in roofs. It costs less, yet adds amazingly to the beauty and salability of any building.

There is nothing like it in the building material field. There can be nothing like its exclusive features which are the result of scientific discoveries and new patented processes.

### Chain Manufacture

To further lower the cost to the public and assure adequate manufacturing profits, the chain manufacturing plan has been adopted. Duntex is manufactured locally in plants equipped with line-production machinery under an exclusive manufacturing franchise.

Because of the highly developed power machinery and perfected production plan, very little labor is required. In fact, it may be a one man proposition at the start. Yet, operating at 40% of its guaranteed capacity, net earnings figure in excess of \$1,000 a month.

### Backed by 25 Years of Experience

Duntex manufacturing machinery, processes and product has been perfected by an organization which for a quarter cen-

tury has stood among the leaders in its field. This organization offers Duntex as the ultimate in its long history of successful developments. In fact, it backs its judgment to the extent of granting the Duntex franchise and supplying the equipment on a basis whereby the right man can go into Duntex with but limited capital and let his plant pay for itself.

Already, in advance of formal announcement, several territorial franchises have been granted. So sweeping are Duntex superiorities and so favorable is the opportunity presented that territories will undoubtedly be rapidly taken up. If you are interested in the opportunity chain manufacturing presents, if you are ambitious to own and operate a highly profitable manufacturing business, get the facts at once. Our book describing this manufacturing enterprise is yours on request. Send for it now and learn what this business offers for you in your city. W. E. Dunn Mfg. Co., 430 W. 23rd St., Holland, Mich.



W. E. DUNN MFG. CO.  
430 W. 23rd Street  
Holland, Michigan

4'29

Send me your book describing the non-competitive franchise basis of Duntex manufacturing and show me how a Duntex plant can earn \$1,000 monthly and upwards. Include complete descriptive data on colors and other advancements Duntex provides for builders.

# DUNTEX

*The World's Most Beautiful Roof*

NAME.....  
ADDRESS.....  
CITY.....



# 5 basic reasons why STEEL FRAMING should be used in erecting EVERY MODERN HOME

**1** **STRENGTH**—The great strength of steel provides the most rigid framework known in building construction—no sagging or settling, no expansion or contraction to cause plaster cracks in walls and ceilings. Here is solid, skyscraper construction for residences.

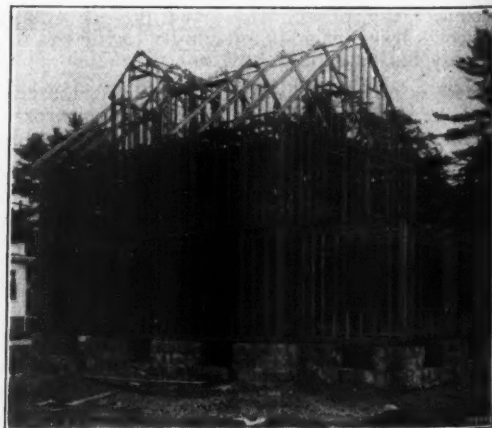
**2** **ADAPTABILITY**—Steel Framing fits into any design and permits the widest range in meeting special requirements in all types of residential buildings. There are no architectural limitations.

**3** **QUICK ERECTION**—The complete Steel Framing comes to the building site with every piece cut to fit and marked for its place. Quick and easy erection is made with ordinary tools by craftsmen familiar with building construction.

**4** **SAFETY**—One of the outstanding advantages of Steel Framing over other materials is its safety from fire. It acts as a lightning conductor and offers the greatest protection against wind and storm.

**5** **ADDED VALUE**—Homes built by the Steel Frame method have increased value because they possess construction advantages not found in ordinary residential erection. Resale values are higher because the worth of permanent construction in this modern manner does not decrease as years pass. Banks look with favor upon steel frame construction, in many instances granting greater mortgages.

*STEEL FRAMING is a practical and economical method by which residences are constructed with skyscraper strength . . . of steel. Write for complete information.*



**STEEL FRAME HOUSE CO.**  
A Subsidiary of McCLINTIC-MARSHALL CORPORATION  
OLIVER BUILDING      PITTSBURGH, PA.

# STEEL FRAMING

THE MODERN METHOD OF HOUSE CONSTRUCTION

# An Idea for Model Homes

## by Corbin

**T**HE "Model Home" is often quite a gamble, isn't it? Liable to have a back-fire, too, if one isn't careful. For instance, if you go the whole hog on quality you may have a \$25,000 (or more) house on your hands in a \$15,000 (or less) neighborhood, which is not so good.

On the other hand, too much scaling down will kill impressiveness and hurt sales. Again—not so good.

Now here is an idea that licks this situation. *Use advertised materials wherever you can.* Home-seekers don't depend on their own inexperienced judgment so much these days. You can't get away from the fact that advertising—particularly house-material advertising is believed.

So it saves a lot of selling talk when you mention Nationally Advertised names. You don't have to explain or demonstrate—they *know*. And how it adds to the prestige of the house—and yourself.

But costs often prohibit the use of some products. Some materials take too big a percentage. Others are made only in limited ranges, few styles, few sizes. And that's a handicap too!

Builders' Hardware! Here we strike oil. Nowhere on the house will such a small investment add so much quality—if, and this is important, Good Hardware—Corbin—and only Corbin, is used throughout. Lots of pat-

terns and finishes to choose from, in fact you can get just the right thing to set off the entrance—and put the quality touch on every door and window.

No possibility of over-investing, for there is Good Hardware—Corbin—at the right price for every house. What a chance of starting the sale *right!* The first thing they see is the front door—just tap the handle as you enter and say: "It's Corbin. Nothing better than

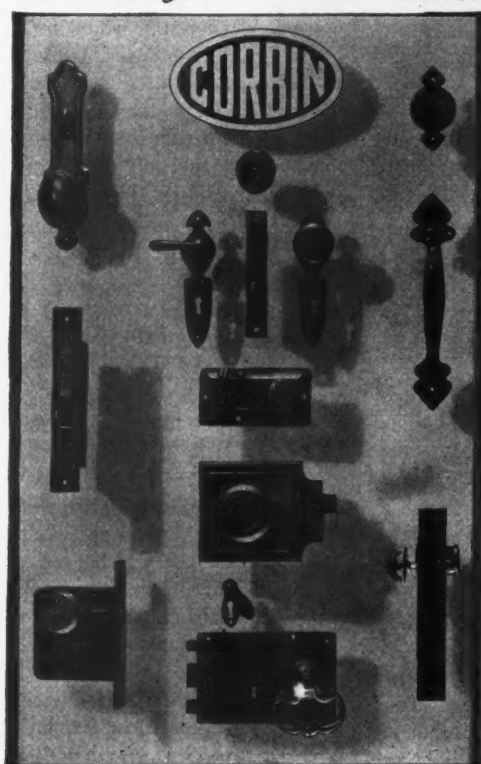
that you know." First impressions count and Good Hardware—Corbin—always creates a good impression—and keeps it.

This isn't a new idea. Contractors all over the country have been using it for years. And they all seem to be pretty prosperous—so it must have helped. Moreover, the big Corbin line offers a wide range for choice to suit the place. Finest mansions—moderate homes—little cottages all have Corbin Hardware—each to suit its own needs. And always right quality, appearance and price.

And last but not least, Corbin is a time-saver. You don't have to go shopping all over every time you build. Corbin has what you want. Think what this means year after year. Just one firm to deal with, just one decision to make, just one bill to pay.

Try it on your next house and prove it for yourself as others have done.

Good Buildings Deserve Good Hardware



P. & F. CORBIN SINCE 1849 NEW BRITAIN CONNECTICUT

The American Hardware Corporation, Successor

New York

Philadelphia

Chicago

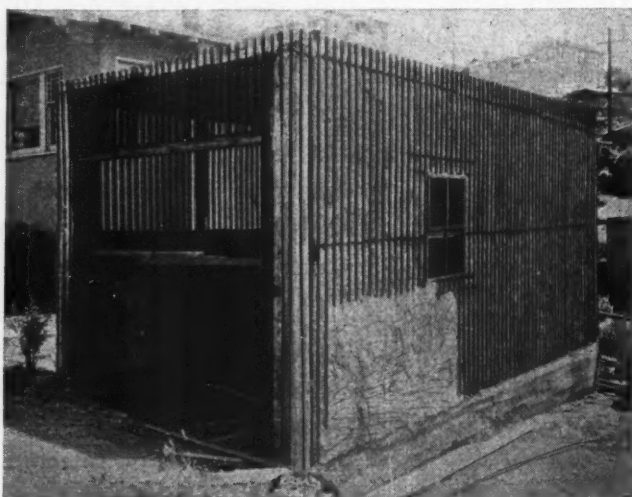
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### Firesafe Garage Material

**T**HE construction of firesafe garages of beauty, economy and utility, which greatly reduce the hazard usually associated with these structures, is very much facilitated by the use of the new metal bases for sidewalls and roofs. Concrete is used on these metal bases without forms being required, rendering construction economical, easy and speedy. The products which make these achievements possible are manufactured by a large steel company which turns out a complete line of firesafe building materials, and they are sold by a country-wide system of dealers in building products.

For construction of a firesafe garage, either in connection with a dwelling or an entirely separate structure, this company recommends that the floor, sidewalls and roof all be of the same materials, that is, concrete upon a base consisting of an expanded sheet of steel. This base acts as both reinforcing and form, the concrete hardening upon it without the use of temporary retaining construction.



**Solid, Two Inch Concrete Walls Are Here Being Constructed, Reinforced by Expanded Metal, Without the Use of Forms.**

A light steel framework is usually erected, and to it are attached the sheets of expanded metal upon which the cement plaster is to be spread to form the surfaces of the sidewalls. Where the roof load is very light, a temporary wood framework to hold the metal can be used to render the use of a steel frame unnecessary. Solid walls of only two inches thickness may be built by plastering the concrete on the two sides of this metal sheeting, which remains to form a most efficient reinforcing. The resulting walls are permanent, sturdy and good looking, unmarred by form marks.

The roof is constructed with light steel trusses, made by the same company which makes the expanded metal base for the concrete. To these roof trusses are attached sheets of a special expanded steel base for use on roofs. These sheets are fastened to the trusses by special clips. The concrete or stucco is applied directly to the metal without the use of forms, and is back plastered on the inside. The result is an enduring, weather-proof and firesafe monolithic roof.



### Better Window Ventilation

**E**MBRACING several exclusive features, the window ventilator and sash-rail ventilators illustrated here are recognized as among the most popular and efficient products for ventilation.

Among the chief features of the ventilators is the patented R-shaped louvres which prevent draught by break-

ing up the air current into small air currents and twice checking it to diminish its velocity. In this way, a constant flow of fresh air is admitted, draughts are prevented and dirt, rain and snow are excluded. The double checking of the air currents, also drops all particles from the air.

This ventilator, which is adapted to use in homes, offices, public buildings, schools, hospitals and other buildings, is easily adjusted without tools and fits all windows.

Made entirely of metal, the ventilator combines strength and durability with handsome, sturdy appearance. A perfect fit is assured, a spring expansion feature holding the ventilator

snug and tight in the window frame and making it almost impossible to put the ventilator in the window insecurely.

The sash rail ventilator, being used in the sash-rails of hospitals, office buildings, schools, colleges, homes, hotels, railway cars, trolley cars and busses, is built in two sizes, to fit openings two inches by 12 inches and two inches by 18 inches. It is built in two sections, the outer containing the patented R-shaped vertical louvres and the inner consisting of a shutter for regulating the air flow.

With the window ventilator, sizes range from 20 inches to 80 inches, with eight inch height on all sizes. Installations of the ventilator will not interfere with the operation of the window.



### Simple Effective Screen Lock

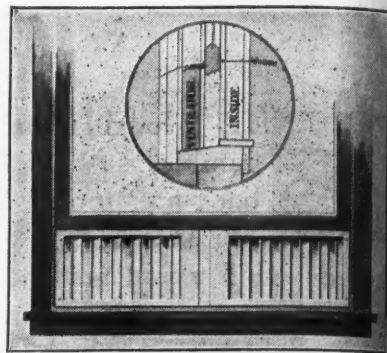
**A**N interesting and useful little device, shown in the illustration, has recently been placed on the market. It is in the nature of a lock for use on window screens and storm sash. It is intended to eliminate the necessity for outside installing of these. The device is a single piece of metal having two prongs so that it can hook either right or left as desired. The inside prong, not intercepting in the keeper, serves for a handle to hold the screen and turn the lock into the proper position where it grips from one point, pulls and draws sideways. It is ornamental and easily installed.

When this device has been installed, screens and storm sash can be taken off on the inside of the windows for cleaning glass and replacing again. It is a safeguard against burglary because it cannot be taken off from the outside until the locks are released. It can be placed on sides or corners where it is difficult if not impossible to install the more familiar locks.

When screens are installed with these locks the outside appearance of the building is not marred by unsightly hangers and the use of ladders, which damage the lawn and shrubbery, is eliminated. To prevent children tampering with the locks, both screws can be drawn down to a clinch in locked position. The locks are placed, preferably, near the middle of the top and bottom sash, on both sides of the screen. Either a screw or screw eye is used for a fastener.



**A Simple Device to Effectively and Economically Fasten Screens.**



**Draughts, Dirt, Rain and Snow Are Excluded by This Ventilator Which Fits Any Window.**

The illus-  
achievements  
Asbestos  
cation b

Gen  
ASB

Manufa  
and the  
built up  
pressur  
provide

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impreg  
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Regar  
Hexago  
Shingles  
durable

Two po  
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This e  
greater  
the roof  
This b  
mineral  
quality, s

RU  
A small illustration of a house with a chimney, likely part of an advertisement for roofing materials.

**SPECIALTIES for Quick Sales and PROFITS**

# ROOFS for every style home and for every purse



The illustration above shows the beauty of roof line achieved through the use of Genuine Ruberoid Asbestos Shingles. The American method of application has been used on this roof.

## Genuine RUBEROID ASBESTOS SHINGLES

Manufactured from asbestos rock and the finest quality cement, and built up in layers under hydraulic pressure, Ruberoid asbestos shingles provide a fire-proof lifetime roof.

There is a wide choice of colors in natural, variegated and mottled effects. This coloring is indelibly impregnated—your assurance of permanent non-fading beauty.

Regardless of whether you select the American or Hexagonal method of application, Ruberoid Asbestos Shingles will provide you beauty in the form of a strong, durable and fire-proof roof.

### The 40% Thicker Asphalt Shingles

Two popular extra size, extra weight and extra value shingles. Both are 40% thicker than usual shingles, but because of their size the finished roof costs no more. The money saved in application, time and labor is put in a thicker, better roof.

This extra thickness provides more than extra life. It assures greater beauty—for each style casts deep shadows which give the roof massiveness.

This beauty is further enhanced by the distinctiveness of the mineral finishes used—a rich softness of color that reflects quality, style and good taste.

**Genuine**  
**RUBER-ROID**  
**SHINGLES — ROOFINGS**

Colorful Varieties • Durable • Fire-Resisting

*Nature's Choicest Colors Blended by Experts*

**I**N this day of color consciousness—roofs can no longer sell which are drab or colorless, nor can they be “spotty” or too brilliantly hued.

Fully realizing this, Ruberoid engineers in conjunction with a nationally famous color expert, spent months in perfecting scientifically correct color blends. Hundreds of different color combinations were experimented with—scores of model roofs were tried out on miniature houses of various architectural styles.

The result was shingles of soft, rich color tones—perfect in color balance.

Regardless of the type of home you wish to roof, you will find a *Genuine Ruberoid Shingle* correct in color value and especially made to harmonize with the architecture—color scheme—and scenic surroundings of your home.

Write for samples and literature.

**The RUBEROID Co.**

NEW YORK and CHICAGO

Offices and Warehouses in Principal Cities

### A Genuine RUBEROID ROOF for every purse and purpose

No matter what type of building you wish to roof, there is a fire-resisting *Genuine Ruberoid Roof* to meet the conditions imposed and to fit your pocketbook.

Each class of *Genuine Ruberoid Roofs*—asbestos shingles—asphalt shingles—or roll-roofings—represents the utmost in beauty and in quality—dependability that translates itself into years of satisfactory service.



The roof shown in upper illustration is *Genuine Ruberoid Massive Hex-strips*. The lower panel illustrates a roof of rare beauty—*Massive Units*.

The RUBEROID Co., (Dept. 1),  
95 Madison Avenue, New York, N. Y.  
Please send samples and literature of the following  
*Genuine Ruberoid* products:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> American Method | <input type="checkbox"/> Ruberoid Asbestos Shingles | <input type="checkbox"/> Hexagonal Method |
| <input type="checkbox"/> Octagonal       | <input type="checkbox"/> Ruberoid Strip-Shingles    | <input type="checkbox"/> Square           |
| <input type="checkbox"/> Massive         | <input type="checkbox"/> Ruberoid Unit-Shingles     | <input type="checkbox"/> Hexagonal        |
|  | <input type="checkbox"/> Standard                   | <input type="checkbox"/> Lock-down        |

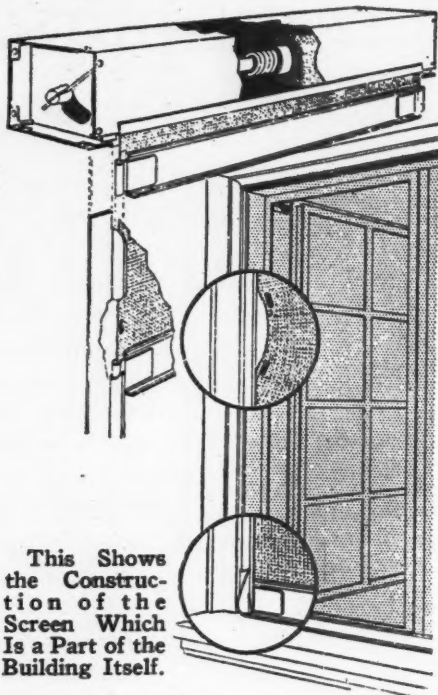
Name .....

Address .....



### Permanent Inside Screens

THE screen illustrated here is permanently installed on the inside of the window where it is easily accessible and can be raised and lowered at a touch, for operating or washing the window. It does not gather dirt and it offers



This Shows the Construction of the Screen Which Is a Part of the Building Itself.

year around protection to draperies which, in many cases cost more than the combined screen and window. It never requires the work of taking down and storing away during the winter, as it can be rolled up entirely out of the way when not needed. Being inside the building, it is so protected that it does not require annual repainting.

If the screen wire accidentally receives a blow hard enough to tear or bag the ordinary screen, the lugs in the selvage of the screen are released at the sides without injuring the wire. Upon pulling all released lugs toward one, raising the screen and again lowering it, the lugs automatically re-enter the guides and the screen is stretched in its normal position.

These screens are constructed of lead coated terne-plate metal which forms a perfect bond for paint. The screen wire is 16 mesh, rust-proof, alumina, woven with a double selvage. This screen rolls into a metal housing 2½ inches square, on a metal roller encased in a heavy, oil-tempered coiled spring. The wire is held tight at all times and will not sag or bag with use.



### Colored Slate Adds Beauty

WHEN the architect specifies slate we usually associate this natural product with the school room black-board. Yet its many uses have constantly been specified by the architect for endurance and beauty. The natural characteristics of slate distinguish it from other structural stones. It combines non-absorption, non-contraction and endurance that has made it popular for economy, efficiency and attractiveness.

One of the leading producers of slate introduced, some years ago, a colored slab which has been endorsed by outstanding architects and builders. In this day perhaps as never before color has predominated the building field. Its use is indeed an innovation, for it has brought to the home as well as the public buildings a note of cheerfulness and distinction.

The kitchen, once the drab and uninviting workshop of the housewife, is today as rich and cheerful as any other room in the house. For wainscoting, this colored slate, which is obtainable in over 16 beautiful veined and marbled designs, offers a wall of not only rich color but of a smooth, highly polished surface that defies grease and dirt always retaining its freshness and never requiring replacement. In hotels, clubs and public buildings,



In the Lobbies of the 77th Street Apartment, New York City, Nathan Korn, Architect, Colored Slate Was Used from Floor to Ceiling.

this beautiful product has added a touch of luxury and rich exclusiveness.



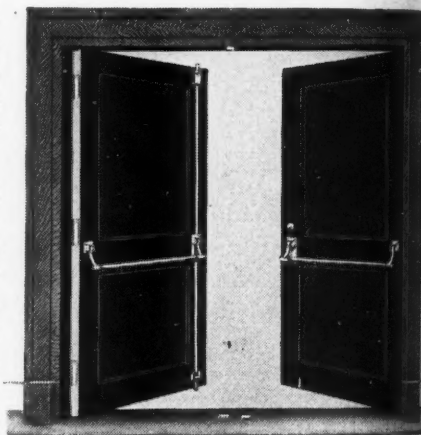
### Automatic Exit Locks

THE principle purpose of automatic exit fixtures is to provide, for buildings where people congregate, a safe and ready means of releasing the exit doors in time of emergency, to eliminate the possibility which inevitably follows upon the failure of an exit door to swing wide instantly before the onrushing crowd.

While no one can hope to control the course of human reasoning in times of panic, it is possible to eliminate conditions which might increase the tragedy of disaster. With this in mind, one of the best known manufacturers of door locks has developed a complete line of automatic exit fixtures to meet the requirements of any installation.

In developing this line the designers have kept in mind the necessity of easy and assured operation from the inside at all times and the need for absolute security from without. Fixtures for pairs of doors, for single doors, some to operate from the outside by handle, some by knob, others to be inoperable from the outside, these are typical conditions which these fixtures have been designed to meet.

For dealers' stock there are fixtures which can be readily adapted to any size door, right or left hand. For hollow metal or fire doors there are devices with three-point bolting features to prevent warping under intense heat. The locks and latches used with this line of push bars are of the regular cylinder and bitted-key types made by this company, with the various functions to suit exit door requirements.



Locks Which Permit Instant Opening Go Far Toward Preventing Disaster in Panics.

The Black & Decker Mfg. Co., Towson, Md., has just issued a booklet on its motor driven electric sanders which contains illustrations showing the different uses of these sanders.

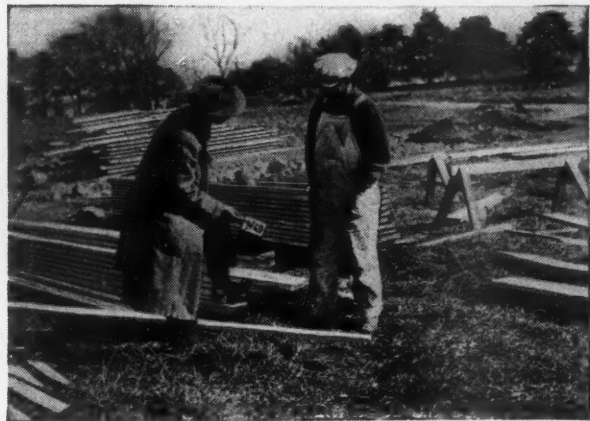
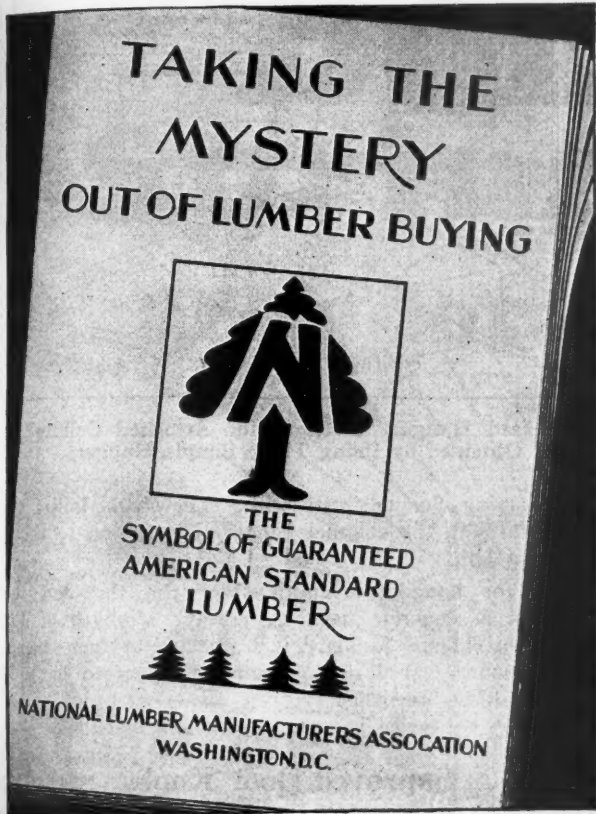
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**SPECIALTIES for Quick Sales and PROFITS**

# And Now . . . Guaranteed Lumber Nationally Advertised



**Every builder will want to read this free booklet.. Facts about National Trade and Grade-Marked Lumber**

"**T**aking the Mystery out of Lumber Buying" is the title of the new free booklet from the Lumber Library. It tells you how you can profit from building with "National Tree" trade and grade-marked lumber . . . it shows you the many advantages to be gained from a general use of this easily identified building material in your own construction operations.

When you build with this lumber — "American Standard Lumber From America's Best Mills" you can guarantee purchasers the quality of the lumber that goes into every house you have for sale. Millions of householders are reading about guaranteed lumber in the great national periodicals.

You will want to know about this easily identified lumber—how it is made, where it can be purchased, why you will profit by using it. Know the lumber you use!

### Send the Coupon Now!

Think what it will mean to have nationally advertised guaranteed lumber in your houses! Trade and grade-marked lumber is sure to change building practices in the whole building and construction field. Prospective home builders and purchasers will be demanding it in the houses they build and buy. Architects will soon be specifying it. Send for the booklet now.

Get the whole story about National

Trade and Grade-Marked Lumber—it will mean increased profits for you.



National Lumber Manufacturers Association  
Dept. 4752, Transportation Building  
Washington, D. C.

Gentlemen: Please send me a free copy of "Taking the Mystery out of Lumber Buying" and other publications helpful to builders.

Name \_\_\_\_\_

Company and Position \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

**NATIONAL LUMBER  
MANUFACTURERS ASSOCIATION**  
WASHINGTON, D. C.

New York . Atlanta . Pittsburgh . Boston . Chicago . Indianapolis  
Dallas . Memphis . San Francisco . Portland, Oregon . Kansas City . Minneapolis  
Los Angeles



### A Permanent Tile Floor

**B**UILDERS and architects will be interested in a resilient floor tile, which is said to afford an unusual measure of quietness, wear-resistance, water and dampproofness and permanent adherence to the subfloor. It is guaranteed to stay down and give perfect satisfaction when laid directly on concrete basement floors at or below grade. The guarantee is based on performance in actual service.

This tile is composed chiefly of asphalt and asbestos, and retains all of the well-known water, fire, time and wear-resisting characteristics of these materials. Being entirely of inert and inorganic composition, there is no chemical action taking place in the tile at any time. Therefore it does not rot, curl, shrink nor loosen from the subfloor.



**A Floor of This Tile Possesses Both Beauty and a Maximum Resistance to Every Element Which Damages Floors.**

In application, the floor is laid tile by tile in a bond of special asphalt cement produced by the manufacturer. There is always a perfect fitting of the tile together without gaps or untrue edges. This is due to the manufacturer's practice of cutting the tile when cold, thus avoiding shrinkage and misshapes.

None of these tile have ever been known to wear out. Installations made eight to 10 years ago show no signs of wear, presenting today a more polished and beautiful surface than when new, it is stated. No polishes, waxes or special cleaning preparations are required to keep a floor of these tile perfect in appearance. There is nothing known that will stain such a floor. Therefore, vigorous scrubbing is never necessary. The tile will take no stain of any kind that cannot readily be removed with a damp cloth.

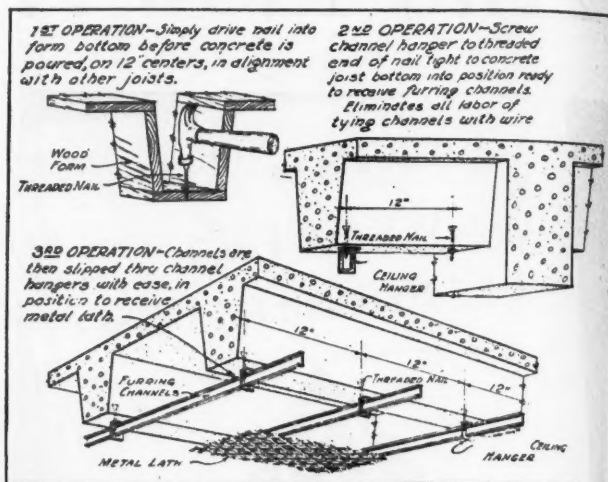
There are six sizes available, and seven attractive colors. These colors are fast. They are not merely surface tints, but extend clear thru the tile and cannot fade nor grow dull.



### Simple, Strong Ceiling Hangers

**T**HIS ceiling hanger was designed, the manufacturers state, to give more hanging strength than the 14 gauge hairpin wire hangers used in attached ceiling construction. It consists of two pieces, a nail with a threaded end and a hanger to support the ceiling channel. In applying these hangers the workman first drives the nail into the form bottom, before the concrete is poured, on 12 inch centers, in alignment with other joists. This eliminates boring holes through the joist bottom and also much of the labor and material required for hairpin hangers, it is claimed.

After the concrete is poured and the form removed, the channel hanger is screwed to the threaded end of the nail, tight to the concrete joist bottom, in position ready to receive the furring channels. This eliminates all the



**Increased Hanging Strength for Attached Ceiling Is Obtained by Using These Simple Hangers.**

labor of tying channels with wire. The channels are then slipped through the channel hangers in position to receive the metal lath.

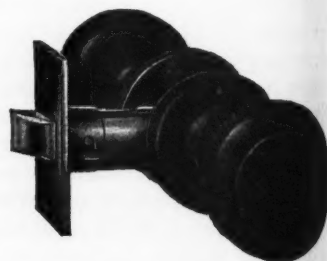
Tests for hanging strength show the threaded nails embedded in concrete have an average strength of 1,020 pounds, the channel hanger  $\frac{1}{8}$  inch thick an average strength of 350 pounds. If desired, channel hangers to hang 700 pounds can be furnished.



### Improved Door Knobs

**T**HE influence of the modern trend is affecting nearly every phase of our life. To meet the demand for modern things tubular latches is now introduced with bakelite knobs and roses in a variety of pleasing combinations. These tubular latches are furnished with these knobs and roses in black and walnut. They need no applied finish, as the natural finish is a subdued luster, which adds a charming effect to doors. The designs are handsome.

The advantages of these knobs and roses over the usual brass or steel sets is the finish which, aside from being unusually harmonious and attractive, is absolutely permanent. It is acid-proof, fireproof and cannot wear off as it permeates the entire material of which these parts are molded. The durability of finishes on



**Handsome Door Knobs of Bakelite Which Will Always Retain Their Appearance.**

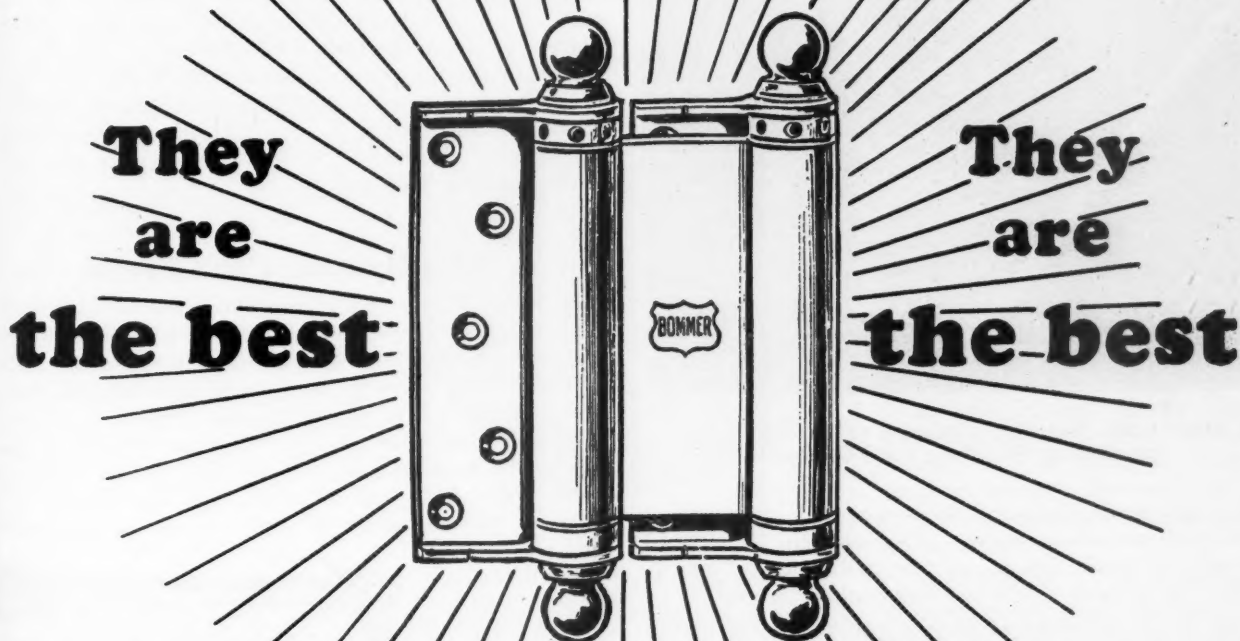
brass knobs, on the other hand, is dependent almost entirely on the protective coatings of lacquer which cover them. This soon becomes impaired through natural wear and the action of acids deposited on it by perspiring hands, and the finish in turn wears through, exposing the base metal.

All exterior metal parts of these latch sets, including plain and locking roses are made of solid brass, and can be obtained in any finish desired. These sets are furnished with the regular tubular latch, which requires no mortising, but is installed by simply boring two holes, thereby making a big saving in installation cost.

**SPECIALTIES for Quick Sales and PROFITS**

# THINGS TO ADORE **Bommer** Spring Hinges

**are adorable on a door**



**Equip your doors**  
with them and know  
**COMFORT**

**Don't pull against the stream—  
float with the BOMMER tide**

Bommer Spring Hinge Co., Factory and Offices, Brooklyn, N. Y., U. S. A. Established 1876

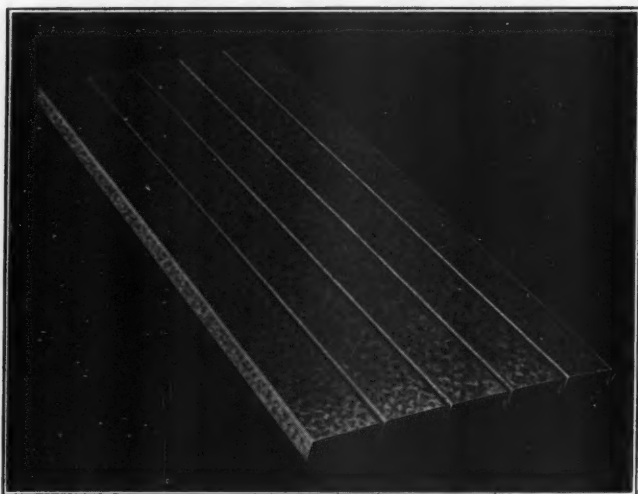


### New Steel Roof Sheathing

A NEW roof sheathing which was developed with the idea in mind of giving to the building industry a more satisfactory sheathing than any heretofore produced for buildings designed with flat roofs, is shown in the illustration. There has been a constant endeavor to find a firesafe roof. Steel, according to this manufacturer, overcomes the objections to all other materials.

Galvanized sheathing is lighter in weight, strong, fire-safe and impervious to dampness. It will not shrink or crack and will not burn. It is easily and cheaply erected, and is economical.

Standard sheathing will carry a roof load of 65 pounds per square foot on standard purlin spacing with a factor of safety of four, with less than allowable deflection for plastered ceilings. It will carry 100 pounds per square foot with only  $\frac{1}{8}$  inch deflection. The usual roof load required by city building codes is 40 pounds.



A Steel Roof Sheathing Designed to Provide a More Satisfactory Sheathing for Flat Roofs

Standard purlin spacing is three feet  $10\frac{1}{2}$  inches, which is the most economical spacing. This sheathing is furnished, however, in heavier gauge, so that the same roof can be carried over greater spaces between purlins.

This special sheathing is made of copper bearing galvanized steel. It is galvanized because galvanizing is a good coating to protect steel, and it is intended that this sheathing shall last as long as the building on which it is used.



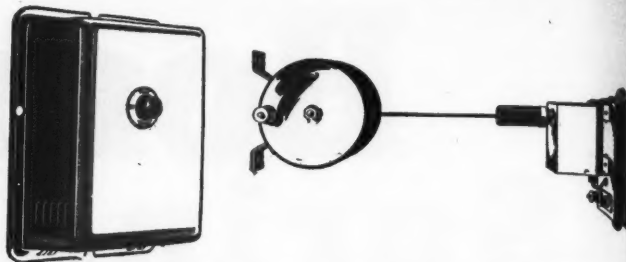
### Practical Home Burglar Alarm

THERE is hardly a day passes without the newspapers recording the burglarizing of a home. In spite of the highly organized police protection, the marauder strikes here and there, leaving terror, loss in money and destruction in his path. However, in most cases, these burglaries happen in homes that are unprotected. Where there is a system of protection, statistics show that homes, either when occupied or unoccupied, are comparatively free from molestation.

One of the principal reasons why more homes are not safeguarded by some system of protection has been the difficulty of securing the necessary electrical and mechanical devices. Even practical electricians and electrical contractors are often at a loss to know where they can get the material required for a fool-proof, reliable and practicable installation.

A concern has now placed on the market a complete,

self-contained home burglar alarm. This alarm works on the closed circuit system and includes the alarm cabinet, with sensitive relay, bell, batteries and testing key, and the guardian trap, consisting of a swiveling receptacle and jack, insulated flexible conductor, attachment plug and an automatic reel which serves the double purpose of



A Self-Contained Burglar Alarm Adapted to Home Installations Is Cheap Insurance.

keeping the conductor at a proper tension and retrieving and housing the conductor when the trap is disconnected.

The trap may be set so as to extend across a door opening, or the conductor may be looped over the door knob, threaded through a window lift, attached to a window shade, curtain or portiere. In addition to affording protection to the home, the alarm may be installed in garage or any other exterior building. The alarm cabinet is usually installed in the sleeping quarters and the extension bell may be installed in some other premise adjacent to the house that is protected.



### This Hydrant Can't Freeze

MANY hydrants are frozen and rendered useless every winter because they are not turned off before cold weather sets in. This would not happen if the hydrant illustrated here were in use. Once installed, this hydrant can be forgotten, so far as freezing weather is concerned, though, like all valves, it will require an occasional tightening of the packing-gland or renewing of the composition valve disc. Both can be done from the outside of the building without taking the hydrant out or disconnecting any pipes.

With this hydrant installed you will always have the convenience of being able to get water from the outside hydrant at any time, even in the coldest weather,



This Hydrant Construction Gives Positive Assurance Against Freezing.

without a trip to the basement to turn the water on and another to turn it off.

This hydrant is constructed from the best quality materials throughout. The fittings are made of heavy brass castings and the parts exposed to the weather are nickel plated. The valve stems are of the best grade brass rod, which reduces wear on the valve seat and washer to a minimum. The illustration shows the construction which produces the frost-proof character of the hydrant.

The faucet or hose connection is on the outside of the building and exposed to the weather. The valve at which point the water is cut off when the valve is closed is located on the inside wall, in the basement or other warm portion of the building. It is impossible for it to freeze. The connecting pipe extends through the wall, connecting the faucet with the valve by the valve stem which passes through it to operate the valve.

SPECIALTIES for Quick Sales and PROFITS

# KUHLS

## ELASTIC WATERPROOFING COMPOSITIONS

Kuhls' Elastic Waterproofing Compositions have proven their qualities by being subject to the most severe tests on all types of construction in every part of the world for the last *forty* years.

**CAULKING**—For caulking between masonry of window and door frames of wood or steel.

**POINTING UP**—For copings, tops of cornices flashings, joining of tin roofs to walls and all other projecting courses in stone or terra cotta work.

**SEAM**—For expansion joints in terrazzo, tile roofs, swimming pools, bedding slate and tile roofs. For all joints on a horizontal plane.

**EXPANSION JOINT**—For tile roofs, domes, etc. All joints on an incline where a great deal of expansion and contraction takes place.

**GLAZING**—For skylights, conservatories, bedding and glazing of glass in steel or sheet metal frames and all other glass construction work.



BILTMORE HOTEL  
Los Angeles, California  
Kuhls' Elastic Caulking Composition  
used to Caulk Window Frames

**ELASTICITY**—Kuhls' Elastic Waterproofing Compositions never become hard or brittle. They never crack or crumble, always remain elastic and flexible, withstand heat, cold, moisture, excessive vibration, gases, fumes and rapid changes of temperature.

**BOND**—Kuhls' Elastic Waterproofing Compositions will adhere strongly to galvanized and raw iron, steel, wood, glass, stone, concrete, terra-cotta, tin, copper or any other material.

**COLOR**—Kuhls' Elastic Waterproofing Compositions can be manufactured in any color to harmonize with the color of the structural material. These colors do not stain.

**CONSISTENCY**—Kuhls' Elastic Waterproofing Compositions are made up to be used with a trowel, knife or gun.

**H. B. FRED KUHLs**  
6415-21 THIRD AVE.  
**BROOKLYN NEW YORK**



*Get These*  
**Booklets**

- ☐ ELASTIC GLAZING  
☐ CAULKING

- ☐ POINTING-UP  
☐ SEAM  
☐ EXPANSION JOINT

H. B. FRED KUHLs  
6415-21 Third Avenue, Brooklyn, N. Y.

Gentlemen: Please send me, free of charge, your literature on KUHLs' Elastic Compositions. Also enclosed is 30 cents to cover packing and postage for 1 lb. trial can.

Name.....

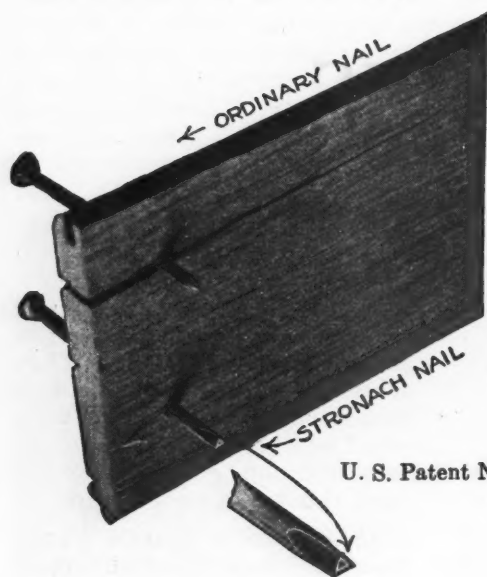
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City & State.....



**SPECIALTIES for Quick Sales and PROFIT\$**

# COSTS REVOLUTIONIZED



## Unretouched Photographs

The camera always tells the truth. The illustrations presented here are unretouched actual photographs.

U. S. Patent No. 1,466,676

**4  
CARDINAL  
REASONS**  
Non-Splitting Feature  
Increased Holding Power  
More Nails per Pound  
Lower Cost Per Nail



*in*  
**New Construction  
Plant Maintenance  
Manufacturing  
Boxing and  
Crating**

*by using*  
**THE NEW  
STRONACH  
PATENTED  
NON-SPLITTING  
NAILS.**

Sold to the **BUILDING TRADE** through  
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**STRONACH NAIL COMPANY**  
2008 Union Bank Building  
Pittsburgh, Pa.



**SPECIALTIES for Quick Sales and PROFITS**

# Steelex not only sells homes but keeps them sold

TODAY'S successful builders find that *reinforced* homes sell faster. They are selling more and more reinforced homes. Nowadays prospects look *under* the surface—not merely *at* it.

Homes reinforced with *steel*! Why not? Concrete bridges, dams, and highways have tested this engineering principle for two generations. And now the same principle, the same protection, is available for safeguarding homes and apartments.

When you build with STEELTEX in place of lath you embed steel reinforcing into plaster walls and ceilings, into stucco exteriors.

This rust-proofed fabric, electrically welded, means permanence, durability, repair-free life. It strengthens the entire framework for the life of the building—with rigid steel!

And STEELTEX does more than reinforce. Its tough fibrous backing shuts out heat and cold, deadens sound, adding value and comfort.

Your prospects want lasting, reinforced homes. Many of them know about STEELTEX—already there are over a quarter of a million successful installations. Write today for full details—or send the coupon below.

## National Steel Fabric Company

DIVISION OF  
**Pittsburgh Steel Co.**

3104 Union Trust Bldg. Pittsburgh, Pa.

The world's largest manufacturers of welded steel fabric



(left)—The problem of lasting, reinforced stucco at moderate cost is solved by STEELTEX in these beautiful modern homes—180 completed, 170 more to follow—Mott Homes, Inc., at Mineola, L. I. STEELTEX for Stucco is also an economical and satisfactory base for stucco overcoating.

(below)—STEELTEX guards the plaster walls and ceilings of this strikingly beautiful home at Greenhaven, Mamaroneck, N. Y. It is one of several STEELTEX-protected homes in this attractive development, which is among the most outstanding in the New York suburbs. Vivian Green Construction Company, New York City, owners and builders.



STEELTEX is used to put completely embedded steel reinforcing into the pleasing stucco exteriors of the 250 residences being built by Wexford Homes, Inc., at St. Albans, L. I. And it adds to reinforcing the important factors of insulation and sound-deadening, thanks to its heavy, fibrous backing.



Here is the façade of one of the famous Laurelton Homes, which are selling as fast as they can be built. STEELTEX for Stucco is being used in this largest development in the world.

## STEELTEX

FOUR TYPES—SAME PRINCIPLE  
SAME PROTECTION

for plaster . . for stucco . . for floors and roofs  
(concrete and gypsum) for stone or brick facing.

National Steel Fabric Company  
3104 Union Trust Building, Pittsburgh, Pa.

Without obligation, send information about material I have checked.

- ☐ STEELTEX for Floors      ☐ STEELTEX for Plaster  
☐ STEELTEX for Stucco  
☐ STEELTEX for Stone or Brick Facing.

Name \_\_\_\_\_

Business \_\_\_\_\_

Street \_\_\_\_\_

Place \_\_\_\_\_

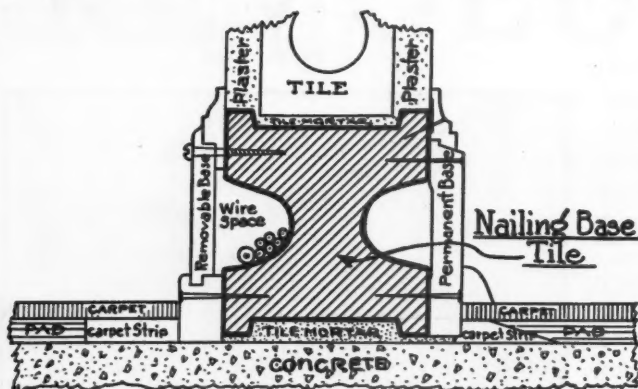


WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### Nailable Partition Base Tile

THE accompanying drawing shows the application of nailable, magnesite tile designed to be used for the first course under partitions and to eliminate the wood ground. It is described as being fireproof, rotproof and vermin-proof and providing a load-bearing strength in excess of five tons per lineal foot. Baseboard can be nailed or screwed to this nailing base tile. It also provides a plaster ground.



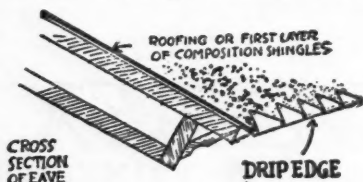
A Number of Advantages, Including a Considerable Economy, Are Claimed for This Partition Base Tile.

This base is designed for use in Class A buildings where poured concrete floors are laid. There is ample space along the sides for wires. One, two or three member base may be used. A magnesite carpet strip may be used in connection with this base as indicated in the drawing. It is so designed that it automatically centers partition tile, it is stated. It is manufactured in 30 inch lengths for clay or gypsum partition tile of standard sizes. It is set in the same mortar used for regular tile and, it is claimed, reduces costs more than 20 per cent.



### Metal Edge Protects Roofing

A SPECIALLY formed metal strip has been developed, and patented, after a number of years of practical roofing experience, which makes it easy to properly fasten, finish and support the edges of flexible (canvas, asphalt or tar) roofings and shingles at the roof edges. It is serviceable also at the peak or ridge edge with a suitable strip of roofing forming a ridge roll or cap of pleasing appearance and durability.



Roof Edge Material That Is Well Worth Its Cost in the Protection of the Roofing.

It comes packed in crates of 600 linear feet and is guaranteed for 15 years' service on the roof. The manufacturers claim the following advantages for its use:

It protects roofing edges against injury by wind, ladders and carelessness of workmen. It reinforces the flexible, roofing materials so that the proper projection of the edges can be made that will carry the roof water beyond the roof edges. It is self-drained, through the V-shaped outlets. It affords no obstruction to the flow of water from the roof. It fastens, securely and easily, the roofing materials with a vise-like grip. It saves nails, only 1/2 the number being required, when laying prepared roofing, as

are usually used. It saves labor, as there are only 1/2 as many nails to drive and saves on the trimming of sheets which it makes unnecessary. It finishes the roof edges smooth, straight and trim.



### New Device to Protect the Home

AN automatic stairway light switch manufactured by a well-known concern is being adopted for alarm systems and is found to be very efficient. It can be placed under any stairway with a cut-off switch in the bedroom or any other convenient place. By means of this switch the light can be turned on or off as needed, on retiring or at any time the owner leaves the building. It can be turned on, so that the lights will switch on when anyone attempts to walk on the stairs, or a bell can be added, wherever desired, to give the alarm.



This Device Serves Both as a Burglar Alarm and as a Convenient Automatic Light Control.

The stairway is the most dangerous place in the home, according to the records of the accident insurance companies. People do careless things. They go up and down the stairs with their arms full of packages and the slightest misstep may mean disaster. This automatic device also makes it possible to flood the steps with light.

It quite often happens that when people are either sleeping or leave the house for a length of time, they forget to turn off the lights in the cellar or attic, and the electric meter is working furiously, wasting electricity, which is not encouraged by the electric companies, who want to give service and not benefit by our wasteful habits. The installation of this switch in the cellar or attic stairs affords an automatic contact which makes it impossible to forget these lights.



### Practical Sash Cord Fastener

THIS device is a sash grip for use with either sash cord, chain or steel center cord. With it in use there are no knots to tie. The sash cord is cut to length and the grips applied on the bench. The method of attaching the grips is simple and quick, saving much time in hanging the sash, it is stated. No change is necessary from the usual practice in fitting sash at the mill or on the job. The grip simply displaces the knot in the cord.



The Sash Cord Grip, in Three Parts, Applied as Shown Here.

This device is made of cold rolled steel and tested to hold 100 pounds or more. It is made in different sizes to accommodate all sizes of sash cords, chains and steel center cords. It is suitable for use in buildings of all types including houses, apartments, schools, public buildings and business and manufacturing plants.

**SPECIALTIES for Quick Sales and PROFITS**



# Prove MAUK Shingle Color Penetration with this *Thumb-nail test*

**STAINED TWICE  
UNDER  
PRESSURE**

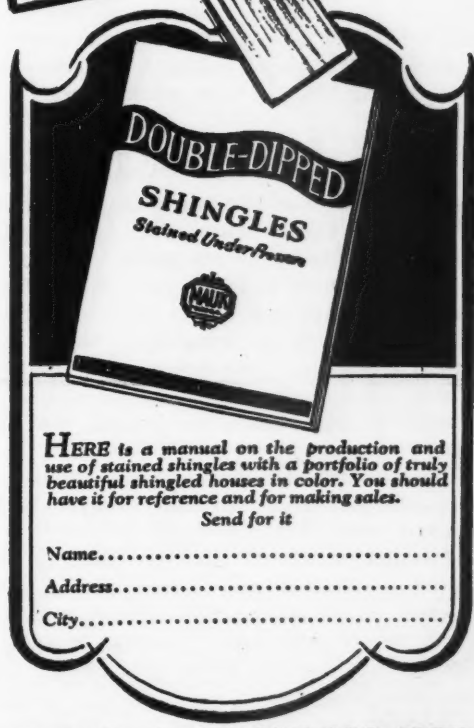
**S**CRAPE the surface of any MAUK shingle with your thumb nail. Do the same with any other stained shingle (taken from a regular bundle—not special sample).

Compare results. MAUK colors penetrate the surface. The creosote oils are forced clean through the wood. That's because Mauk Shingles are stained twice under high pressure (32 tons per bundle). Pressure staining of shingles was pioneered by MAUK three years ago. Only natural mineral colors are used, ground fine and bound with pure linseed oil.

MAUK fine shingles are packaged—dust-proof, practically rain-proof—for better delivery—for easier handling. No mistaking the best shingles! Use MAUK Double-Dipped Shingles for better jobs and quicker sales.

**DOUBLE-DIPPED  
MAUK**

**Shingles Stained Under Pressure**



HERE is a manual on the production and use of stained shingles with a portfolio of truly beautiful shingled houses in color. You should have it for reference and for making sales.

Send for it

Name.....

Address.....

City.....

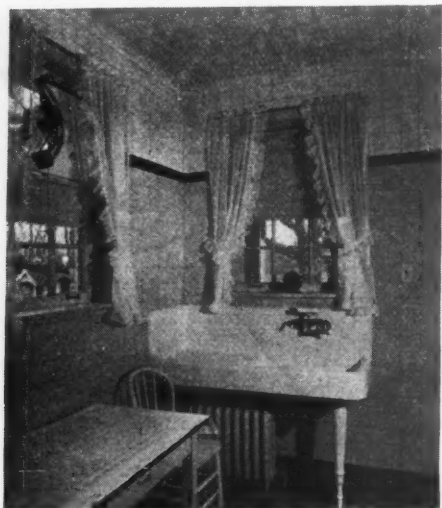
**THE C. A. MAUK LUMBER  
COMPANY • • Toledo, Ohio**

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### A Tile That Is Different

A NUMBER of substitutes for costly ceramic tile, for use in homes of low or moderate cost, have appeared from time to time. But now a material has been placed on the market which is entirely different from anything before offered and which possesses a number of especially desirable qualities. This is a thin sheet metal tile. A hard baked enamel finish has been applied to thin sheets of zinc producing, in sheet form, a material which can be applied



Wherever Tiled Walls Are Desired This New Material Can Be Applied Easily and Inexpensively.

much as wallpaper is applied. In this way flexibility as well as hardness is obtained at a low cost which gives this material a wide field of application.

The base, being of zinc, is non-corrosive and will last indefinitely. By a special process the sheets are lithographed in beautiful two-tone color effects. It is made in six color tints. The standard size, for kitchens

and bathrooms is a four inch tile effect on sheets of number five gauge zinc, 16 by 24 inches in size. The edges are die cut with a half scoring so that the sheets come together on the wall, making a perfect fitting tile joint.

A special, water-proof putty cement is used for applying. The application is like that of wall paper and the work is done, not by tile setters but by painters or paper-hangers, which reduces the cost. It can be applied to any smooth, porous surface after a priming coat of good lead paint has been used. The manufacturers claim that the cost of the material installed is about one-third that of clay tile. It will not fade, crack or peel.



### For Plastic Textures

THE illustration shows a plastic texturing material from which the most artistic finishes and color combinations can be produced with the utmost ease of application. It is, in itself, both a decorative and finishing material. It has an oil base and comes ready for use. There is no labor or delay in preparing it for work. The actual application is simple. One operation is all that is necessary. There is no sanding or sizing to consider before glazing. Should a gloss finish be desired, the material may be glazed.

Though this material hardens toughly and firmly, there is no danger that it will crack, chip or peel. It does not become stone-hard and rigid.

Finished woodwork does not have to be taped or protected, as this material contains no injurious products and is easily wiped off the most delicate woodwork, with a dry cloth, before it hardens. Vacuum cleaning is unnecessary, because this material needs no sanding. Unpleasant odors are entirely absent.

Equally important is the fact that on new walls this finish can be applied directly on the brown coat of plaster, doing away entirely with the white coat. However, the material is effective and economical on all types of walls



An Economical Plastic Wall Finish Which Makes Possible a Wide Variety of Artistic Decorations.

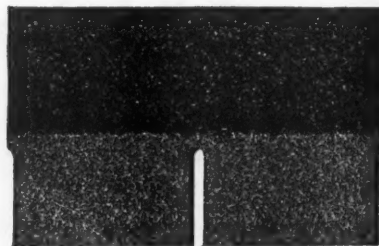
as a covering, decorative and finishing material. Labor savings of from 15 per cent to 40 per cent are common, with the completed job actually costing anywhere from 10 per cent to 30 per cent less than is ordinarily estimated, it is claimed.



### New Roofing and Insulation

A WELL-KNOWN roofing manufacturer is now marketing two new materials. One of these is a thick butt shingle. This shingle, in its method of manufacture, its appearance and safety on the roof, marks a long forward step in the manufacture of asphalt shingles, it is claimed. It fills the long felt need for a heavy weight, thick butt shingle at a moderate price.

This shingle can best be described by saying that it is the standard asphalt shingle plus another layer of coating and another layer of slate, giving additional protection against weather and fire. The standard shingle consists of asphalt saturated felt, a asphalt coating, and a surfacing of slate. This new thick butt shingle consists of asphalt saturated felt, asphalt coating, a surfacing of slate and an additional coating of asphalt and an additional surfacing of slate on the exposed portion of the shingle.



A New, Heavy Weight, Thick Butt Asphalt Shingle at Moderate Price.

The second product is an insulating board. This board is recommended as a plaster base for use with gypsum plaster and for insulating work in the outside walls, between floors, and underneath roofing. The board is light and easily handled, weighing only 492 pounds per thousand square feet. It has a waxed, and consequently moisture-proof, back. It comes in sheets 32 inches wide by 96 inches long or, when used for insulating lath, 32 inches by 24 inches. Its thickness is about 1/2 inch. It is put up in convenient sized bundles. This board is also an excellent sound-deadener, and tests at the Massachusetts Institute of Technology show that it bars out 96 1/2 per cent of sound, it is stated.



The Pick-Barth Co., Inc., 1200 W. 35th St., Chicago, Ill., has published a new 330 page general catalog which is in effect an encyclopedia of information for executives of hotels, restaurants, clubs, hospitals and institutions.

SPECIALTIES for Quick Sales and PROFITS

# READY MONEY FOR LOANS ON Face Brick Construction

**Chattanooga Savings Bank & Trust Company**  
CAPITAL, SURPLUS & PROFITS \$1,750,000.00  
**Chattanooga, Tenn.**

January 11th, 1929.

W. A. SADD, PRESIDENT

American Face Brick Association,  
130 North Wells Street,  
Chicago, Ill.

Gentlemen:

In the making of mortgage loans on residence property in which we have been engaged for more than forty years, we naturally give preference to loans on property constructed of face brick as such construction has a longer permanent value than other classes and its upkeep is much less.

Face brick buildings appeal to people as they retain their attractiveness thru a period of years and do not show as much as other materials the wear and tear of time and the elements.

We always advise purchasers of property and those considering building to use this class of exterior on account of its fire-proof quality and the permanency of the construction.

As an exterior finish we believe face brick has qualities superior to other classes of construction, and the obsolescence and deterioration of this class of property is at the very minimum. It gives us great pleasure to recommend face brick construction wherever possible.

Yours truly,

*W. A. Sadd*  
President.

*Show this letter  
to your banker*

**Send for  
Face Brick  
plan books**

AMERICAN FACE BRICK ASSOCIATION,  
2163 City State Bank Bldg., Chicago, Ill.

*If you live in Canada, please write to 26 Queen Street East, Toronto, Ont.*

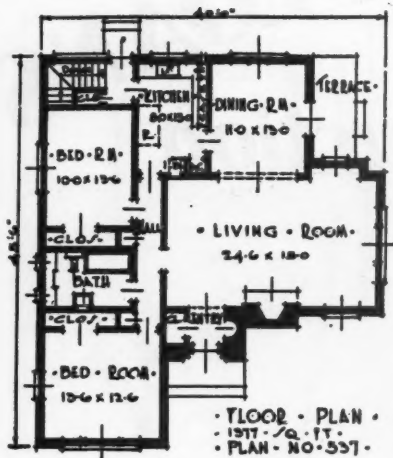
Please send booklets I have checked:

- ☐ Up-to-date book on remodeling, free.  
☐ Story of Brick, beautifully illustrated, free.  
☐ Manual of Face Brick Construction, 116 pp., 50c.  
Designs and floor plans for ☐ Inexpensive 3 & 4 room houses, 25c. ☐ 5 room houses, 25c. ☐ 6 room houses, 25c.  
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Name.....

Address.....





## An unusually well designed Small House

A WELL designed small house is rare indeed. Yet, here is one that in proportion, mass and decoration measures up to every standard of architectural beauty. The street elevation with its appealing circle head entrance, long windows and ornamental flues has a very distinctive attractiveness. The floor plan is a particularly happy one; combining, as it does, compactness with spacious rooms.

It will be an easy house for you to sell, and equally easy to build, for *complete* plans and specifications will be furnished from which to work. The charge for the plans is \$12.00, just enough to cover our cost.

There are many such houses in the booklets offered in the coupon below. Every builder should know them all, and we suggest you write for them before the building season starts.

## BRICK

*beauty forever*

These District Association Offices and Brick Manufacturers Everywhere are at Your Service:

Boston	11 Beacon Street
Chicago	228 No. LaSalle St.
Cleveland-Ohio Assoc.	2124 Guar. Title Bldg.
Denver	1735 Stout Street
Detroit	400 U. S. Mortgage Trust Bldg.
Hartford	226 Pearl Street
Los Angeles, Calif.	634 Chamber of Commerce
New York City	1716 Grand Cent. Term.
Norfolk	112 West Plume Street
Philadelphia	1420 Walnut Street
Pittsburgh	524 Fourth Avenue
Raleigh, N. C.	508 Com. National Bank Bldg.
Salt Lake City	301 Adas Block
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Seattle, Wash.	913 Arctic Building

COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA  
A2131 GUARANTEE TITLE BUILDING CLEVELAND, OHIO

### Clip and Mail This TODAY

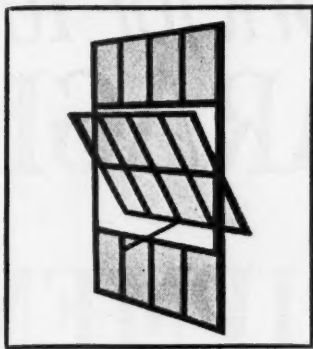
Without charge, please send me a copy of "Common Brick."

I am enclosing cash or stamps for the booklets checked.

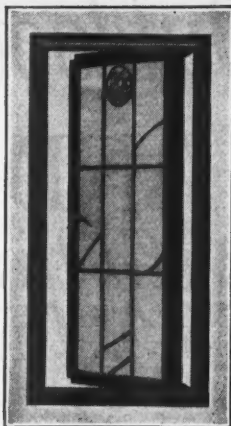
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(Enclose \$1.25 if you want all the books)

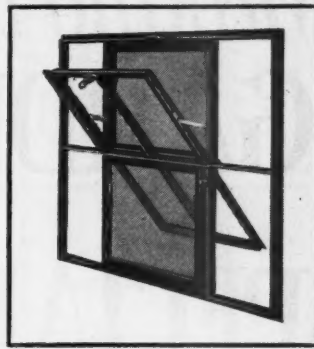
## SPECIALTIES for Quick Sales and PROFITS



**PIVOTED WINDOWS** for industrial buildings of all types. Thirty-nine different layouts and sizes. Deep horizontals and verticals. Same standard construction features as in made-to-order windows. Sufficient variety in single and combined units to fit any required opening and provide any desired ventilation.



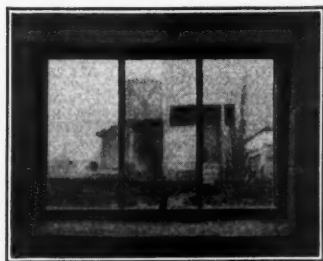
**CASEMENT WINDOWS** suitable for use in many kinds of buildings and various types of wall construction. Used in frame, shingle, stucco and brick residences. No interior wood trim is necessary and stools are often of steel, slate or marble. Adaptable to residences of magnitude and distinction and also to homes of modesty and charm.



**PIVOTED WINDOWS SCREENED** solve a difficult problem in an easy, practical way. Window is specifically designed for efficient, economical and attractive screening. Ventilators operate without movement of screens or flexing of screen contact. Screens are easily removable for cleaning or winter storage. Sections, 1½" deep. Quantity production reduces initial cost.

# Bayley Springfield

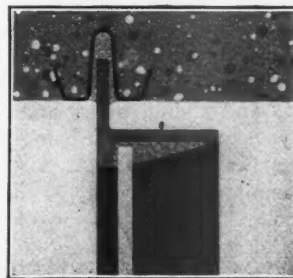
Steel Windows and Steel Products



**WINDOWS FOR BASEMENTS** in residences, apartments and other buildings. Fine for side walls of garages and similar small buildings. Special hinge permits ventilator to be easily and quickly removed and replaced without tools. Not removable from the outside. Made in four sizes.



**TUBULAR STEEL DOORS** that are strong, practical and good looking. Swing or slide types. Hinged to swing in or out. Single or double. Hardware specially designed and built for hard, continuous service and to meet every modern requirement.



**STEEL WINDOW INSERTS** are formed strips of galvanized rust-resisting Armco Ingot iron which provide recesses in jambs and across openings where steel windows are to be used. Two types—one for concrete construction and finish and another for buildings of concrete frame faced with brick.

*Write for descriptive illustrated folder on any of above products. Warehouse stocks carried in principal cities.*

**THE WILLIAM BAYLEY COMPANY, 128 North Street, Springfield, Ohio**

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*Sales Agencies in Principal Cities*



# *Making the Outdoors Work for You—* **GARDEN AND GARAGE** *With their* **SPECIALTIES of EQUIPMENT** *A Very Great Help in Merchandising—* *The Modern Home*

**N**O house can be separated from its setting. The grounds with garden and garage included form a part of the whole picture. Therefore the grounds should be planned and equipped as carefully as the house itself, and, if it is, it will be a large factor in influencing the sale of the property. It might not occur to one that there are many specialties for the garden and garage; but a little thought makes us realize that here, as at every other point, the building industry has been producing specialties that add to the salability of homes.

The most conspicuous feature of the present day home site is usually the garage. Nearly every family, these days, has at least one car; and it must be housed and cared for. Many garages are built as an attached part of the house itself. More are separate buildings. But in either case the garage should be in harmony, architecturally, with the house; if it is not the picture will be spoiled. Appearance, however, is not the only thing about the garage that is to be considered. Garage hardware of the proper sort is very important.

The feature that is given most attention is the hardware for the large doors through which the car must pass. There are swinging doors and sliding doors and special types of door. These being large and heavy must be so equipped that the woman of the house, and even the children, can handle them without difficulty; and the problem is complicated by windy days and, in winter, by snow and ice. But the garage door hardware manufacturers have worked on this problem and have solved it most successfully. Various types of hardware can be had that make the garage doors easy to handle and this feature can be pointed out to the prospect with good effect.

Garden furniture adds a great deal to the well planned garden and it is available in many styles and in wood, stone and cement. A beautifully planted garden with a sundial, a seat, a trellis or pergola is always a most inviting feature of the home site and a sales aid for the builder. The walk may be of flagging and, in fact, this type of walk is now much in vogue for the approach to the front of the home. Even the utilitarian clothes pole has been given attention by the manufacturers, and steel poles may now be obtained which are neat in appearance and which can be removed from a ground socket when not in use.

Awnings have come into favor to a notable degree in recent years, especially for the popular Spanish style of home, but they are also appropriate for other styles and do much to make the house more comfortable in summer weather and so more desirable. Awnings have been improved and hardware for them has been developed which removes any faults they may have had in the past.

If all the specialties for gardening and garage were to receive comment it would be a long story, but a list of the various items will prove useful and such a list follows:

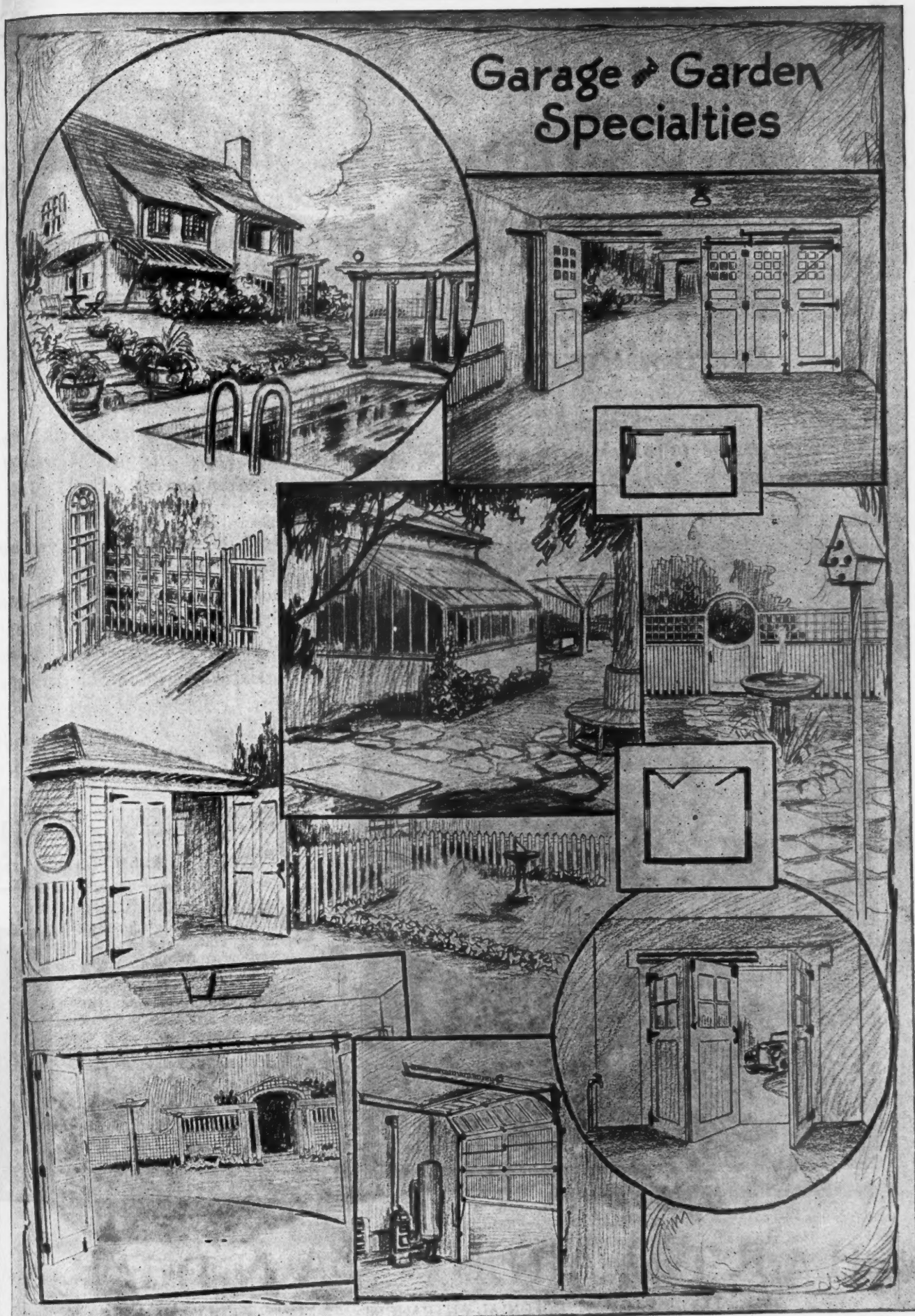
## **Garage and Garden Specialties**

- |                      |                                      |
|----------------------|--------------------------------------|
| Special Garage Doors | Pressed Metal Columns                |
| Garage Door Hardware | Sewage Disposal Systems              |
| Garage Door Opener   | Conservatories and Sun Rooms         |
| Garage Heaters       | Swimming Pool Equipment              |
| Steel Sash           | Special and Ornamental Fencing       |
| Wire Glass           | Ornamental Gates                     |
|                      | Garden Furniture                     |
|                      | Trellis, Pergolas and Sun Dials      |
|                      | Clothes Posts and Dryers             |
|                      | Awnings and Awning Hardware          |
|                      | Lighting System, Electric Generating |
|                      | Gas System for Cooking and Lighting  |
|                      | Burglar Alarms                       |
|                      | Flagging                             |
|                      | Window Guards                        |
|                      | Landscape Gardening                  |
|                      | Garage Plumbing                      |
|                      | Lawn Irrigating                      |
|                      | Fountains                            |



**This Attractive Garage Is Equipped with Counterbalanced Doors That Slide Up—a Well-Liked Specialty That Helps to a Quick Sale.**

# Garage & Garden Specialties



A Few of the Popular Specialties for the Home Grounds and for the Home Garage That Help to "Complete the Picture" and Make a Quick Sale.



# A charming GARDEN HOUSE

*will lend character and completeness to the surroundings of many homes*

*The possibilities for architectural adornment in extensive private gardens and public grounds, as well as in beautify-*

*ing the yards and gardens of more modest homes, very often suggest the use of a pergola or garden house.*



*Hartmann-Sanders pergolas, garden houses and other outdoor features are a reflection of the modern quest for beauty, and lend an unmistakable note of distinction to home surroundings. They are significant of life's finer and more beautiful phases.*

THESE TWO BOOKLETS OF COLUMNS, COLONIAL ENTRANCES AND GARDEN EQUIPMENT GLADLY SENT

Hartmann-Sanders has published two large, profusely illustrated booklets, which offer countless suggestions concerning architectural adornment of home surroundings. One shows page after page of beautiful pergolas, garden houses, ornamental fences, garden entrances, seats, rose arbors, trellises, columns and garden accessories of all kinds. The other booklet shows all types and styles of famous Koll Lock-Joint Columns. For the booklets, send 30 cents to Hartmann-Sanders Co., Factory and Showroom: 2171 Elston Ave., Chicago. Eastern Office and Showroom: Dept. Y, 6 East 39 Street, New York City.

## HARTMANN - SANDERS

PERGOLAS

COLONIAL ENTRANCES

KOLL COLUMNS

ROSE ARBORS

GARDEN EQUIPMENT

# WHAT'S NEW in CONTRACTORS' EQUIPMENT

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

## A New Light Floor Sander

A FIRM which has been manufacturing floor surfacing and polishing machines, exclusively, for a quarter of a century, has recently added a light weight floor sander to its line. Compactness, sturdiness, simplicity of construction

and ease of operation are outstanding features said to have been incorporated in this machine. Built of aluminum, the complete machine weighs but 180 pounds. The motor can be detached in about one minute by merely removing four bolts, thus bringing the weight of the machine down to 90 pounds. This makes it possible for one man to carry it, easily, from place to place.

The eight inch width sanding drum is driven at a high rate of speed by a powerful 1½ horsepower motor. The special, resilient, shock-

absorbing material which covers the drum makes it impossible to leave waves or vibration marks on the floor. On the other hand, this drum cuts down the high

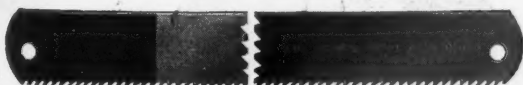
This Efficient Sander Can Be Moved from Place to Place by One Man.

joints and gets down into the low spots on the first time over the floor, it is stated.

An outstanding feature is an automatic, pressure regulator. By means of this device, the pressure may be set for any desired cut and, without further attention, the machine will give that cut as long as the regulator is not changed. This takes all the guesswork out of sanding. The suction system is described as exceptionally powerful and efficient. There is no belt and chain replacement problem as the machine is entirely gear driven.

## New Hack Saw Blade

A CONCERN manufacturing saws and tools has introduced a hack saw blade made of special high class steel. This blade will outlive and outcut any ordinary alloy



An Unusual Guarantee Is Being Made on This Steel Hack Saw Blade.

blades, it is claimed. In fact, the manufacturer goes so far as to guarantee his blades to cut six times more metal and cut twice as fast as any alloy blade cutting the same stock with the same dimension blade. Many users of these

steel hack saw blades get even better results as they are getting as much as 10 to 30 times more service from one such steel blade over one alloy blade, it is stated. The teeth do not crack off the shell because this special steel takes an exceedingly good and tough temper.

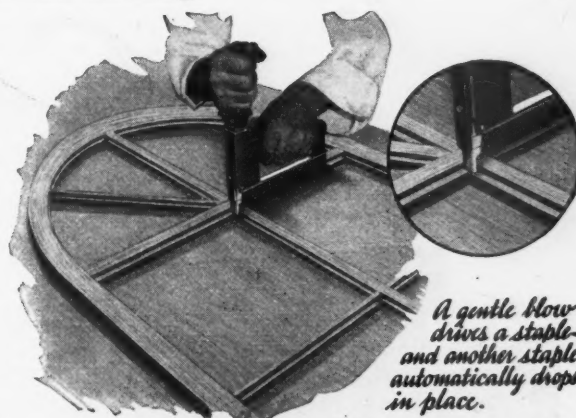
These blades cost three times as much as the ordinary blades, but one blade will do the work of six ordinary blades and therefore the actual cost is only about one-half that of ordinary blades, it is stated.

This company has identified its blade by a distinctive mark so that there will be no trouble in finding the blade that will do the work. They are made in 10 and 12 inch lengths with 18, 24 and 32 teeth per inch.



## Tacker for French Doors

FRENCH doors and other doors of similar types are coming into rather wide prominence. Builders have some difficulty in toe-nailing the divided light parts of these doors. Not only is it difficult to fasten the cross members with hammer and brads, but it is also tedious and time-consuming.



A gentle blow drives a staple and another staple automatically drops in place.

A Machine Which Makes for Economy in Tacking the Light Frames in Making French Doors.

A well-known manufacturer has developed a special model tacker for toe-nailing divided lights on sash and door work. This tacking machine has an extension on the front end which fits into the loose sections of the frame and fastens them in a speedy and satisfactory manner. It is light, convenient and about eight times as fast as an ordinary hammer and brads, it is stated. The cost of the unit is more than balanced by the savings entailed within a few days of ordinary production, according to the manufacturers.

This tacking machine is made of pressed steel plate. It is light and convenient to handle. There is an extension on the front of the machine which fits into the loose rabbetted sections of the frame. A light pressure of the plunger drives a broad staple into the wood, holding the loose sections in place. The operation is more than eight times as fast as the use of an ordinary hammer and brads. The magazine of the tacker holds 105 staples and the machine itself contains a reserve chamber holding 420 more.





**No. 65—** Variety Tilting Table Saw—with motor on arbor; with motor on base; with counter shaft. Each machine furnished with one saw, ripping gauge, and one cut-off gauge with reach rod and stop.

**No. X-24—** A revolutionary new machine. Tilting Arbor Saw Bench—Sturdy, compact, self-contained. Motor built in; saw completely guarded.



**No. X-19—**

High grade, high speed, single spindle shaper. Cuts, without reversing, against, across, as well as with the grain. 8400 r. p.m. spindle runs in best obtainable ball bearings.

## You Can Get Quantity and by using these Mo

**W**OODWORKING machines to produce profits must produce quality and quantity at low costs. Big jobs or little jobs, tough jobs or jobs requiring extreme accuracy and precision—it makes no difference with a Monarch. Monarch machines are producers. Only tested and proved materials are used in their construction. Every machine is guaranteed to give years of constant, steady, dependable service.

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60 MAIN STREET HACK

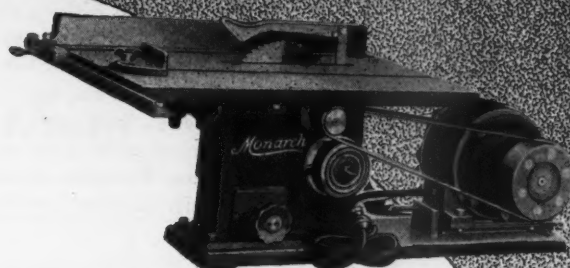
# ity and Quality ese MONARCH MACHINES

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Compact and complete. Portable and readily movable from job to job. All Monarch machines are automatically guarded. Each machine is a woodworking plant in itself. Each turns out its share of work smoothly, swiftly, and with safety to the operator. If you want good work, fast work, low costs and high profits, you want a Monarch machine. Write us for complete specifications and name of distributor near you.

# Monarch

## TRADE MARK

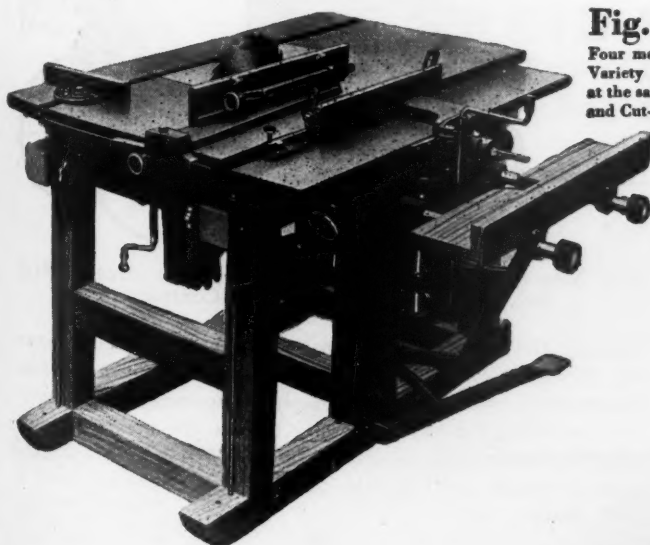
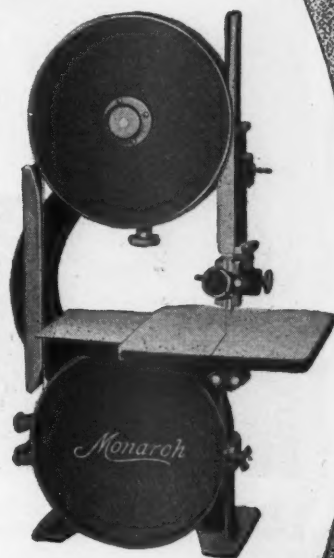


**No. X-17—Bench Variety**

Saw. Not built to a price for occasional home use, but a thoroughly dependable industrial machine with highest grade machine work yet moderate price. Table tilts to any angle up to 45 degrees. Fully enclosed motor with fused switch.

**No. X-9—Bench Band**

Saw. 12" and 16" sizes. Solid wheel guard, completely enclosed, precluding all possibility of accidents. Motor built in. May be operated from lighting current or by belt from any kind of power. Handy—Adaptable—Sturdy.

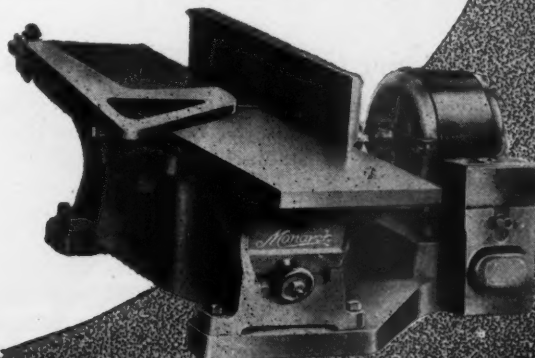


**Fig. 690—**

Four men can use this Variety Wood Worker at the same time. A Rip and Cut-Off Saw Bench, with Boring Attachment, Mole tiser, and Jointer all in one. Send for Booklet No. 82.

**No. X-15—6" Bench Jointer**

Strong, yet light, built for hard continuous industrial use. Arranged for direct motor drive or belt drive, and furnished with ball bearings, the best oftainable.



# LMACHINERY COMPANY

ET HACKETTSTOWN, N. J.



### New Stone Cutting Saw

**A** NEW saw has recently been put on the market which will answer the long felt need for a fast cutting portable electric tool for scoring and cutting stone. This new saw is equipped with a full one horsepower motor, developing a very high speed on the saw blade, so that when a carborundum disc is inserted, the machine will make a smooth, sharp cut in any type of stone. The weight of this machine is well balanced and the tool can be easily handled on stone of any size or shape. As compared with the old method of cutting stone with the hammer and chisel, the speed of the cut with this particular saw is measured in seconds. Cinder block, marble, tile, concrete, asbestos board and slate are a few of the materials easily handled by this new powerful tool.



**This New, Power, Hand Saw Is Designed for Cutting All Kinds of Stone and Similar Materials Rapidly and Economically.**

It is only necessary to score the two sides of the stone to a depth of approximately  $\frac{1}{2}$  inch. A sharp tap on the reverse side of the stone will make a clean, smooth break, leaving an even surface on the stone. This tool alone has been responsible for speeding up many jobs that were days behind schedule, it is stated. Unusually low operating costs make it a very economical tool for the stone contractor.



### Paper Cement Bags a Success

**F**OUR years have passed since the first shipment of cement in paper bags. So quickly were the advantages of this moisture-proof, non-returnable container recognized by the mills, the dealers and users alike, that last year a third of all the cement used was shipped in paper, according to the manufacturers of these bags.

Cement packed in paper bags reaches the job in exactly the same condition in which it leaves the mill. Moisture is kept out by five plies of tough kraft paper with air spaces between. In spite of the weather conditions, cement can be delivered to the mixers thoroughly dry and without caking.

The self-closing valve originated by this company which, it is said, has been responsible for saving millions of dollars for the cement industry and passed along to the users in lowered costs, is incorporated in these paper bags. Losses through sifting, like losses through breakage and spilling, have been eliminated.



**The Five Layers of Tough Kraft Paper Which Form the Walls of This Cement Bag Are Impervious to Water and Assure Absolute Protection Against Moisture.**

The problem of the return bag with all of the annoyance arising through short counts, losses, damaged bags, return shipments, accounting expense and difficulties arising over freight claims have been eliminated wherever paper bags have been specified. This is one of the greatest advantages claimed for the use of paper bags.



### A New Centrifugal Pump

**A** WELL-KNOWN concern has announced the addition of a centrifugal pump to its line of contractors' equipment. This pump comes in three different sizes, with capacities of 325, 650 and 800 gallons per minute, respectively, on a total head of 20 feet. The features of these pumps are an open type impeller, which allows the handling of dirty water; an automatically lubricated center



**This New Centrifugal Pump Comes in Three Sizes to Meet the Varying Requirements of Contractors.**

bearing; the same size suction and discharge flanges, allowing the use of the same size hose for both; and a unit construction which provides absolute alignment and rigidity. This pump added to the manufacturer's line makes the line most complete and includes single and double diaphragm pumps, single and double plunger force pumps, and a road pump.



### Appoint Advertising Manager

**A**N announcement from the Chain Belt Company, Milwaukee, Wis., states that Mr. R. A. Shilbauer, for the past several years assistant advertising manager, has been appointed advertising manager.

Reid-Way Co.  
732 North  
Cedar Rapids  
Gentlemen  
Reid-Way Co.

Name.....

Address.....

# ONLY The Reid-Way

## WHIRLWIND SANDER

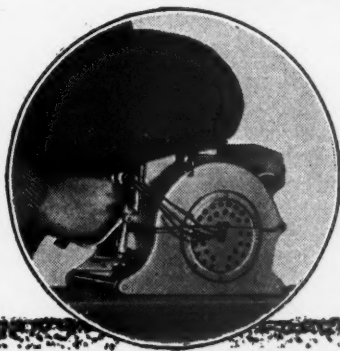
### HAS ALL THESE FEATURES

*Check them* ✓

1. Operates from a light socket.	
2. Weighs only 27½ lbs.	
3. Only one moving part (the sander drum) which is entirely enclosed.	
4. No driving mechanism to become noisy and wear out.	
5. Ball bearing rollers front and rear.	
6. Complete halfturn spiral application of sand paper.	
7. No gap in felt on sanding drum to pound flat.	
8. Sand paper speed a mile in two minutes.	
9. Operates exactly like a plane.	
10. Serves as a jointer or edger in the inverted position.	
11. Has exhaust fans on both ends of sander drum to force the dust into bag.	
12. Straight induction motor—no brushes to wear out.	
13. Motor runs on extra heavy ball bearings. Guaranteed for life of machine.	
14. Greater diversibility of operation.	
15. Works within ½" of base board on either side.	

## The REID-WAY Co.

732 North 16th Street  
Cedar Rapids, Iowa



Reid-Way Company,  
732 North 16th Street,  
Cedar Rapids, Iowa.

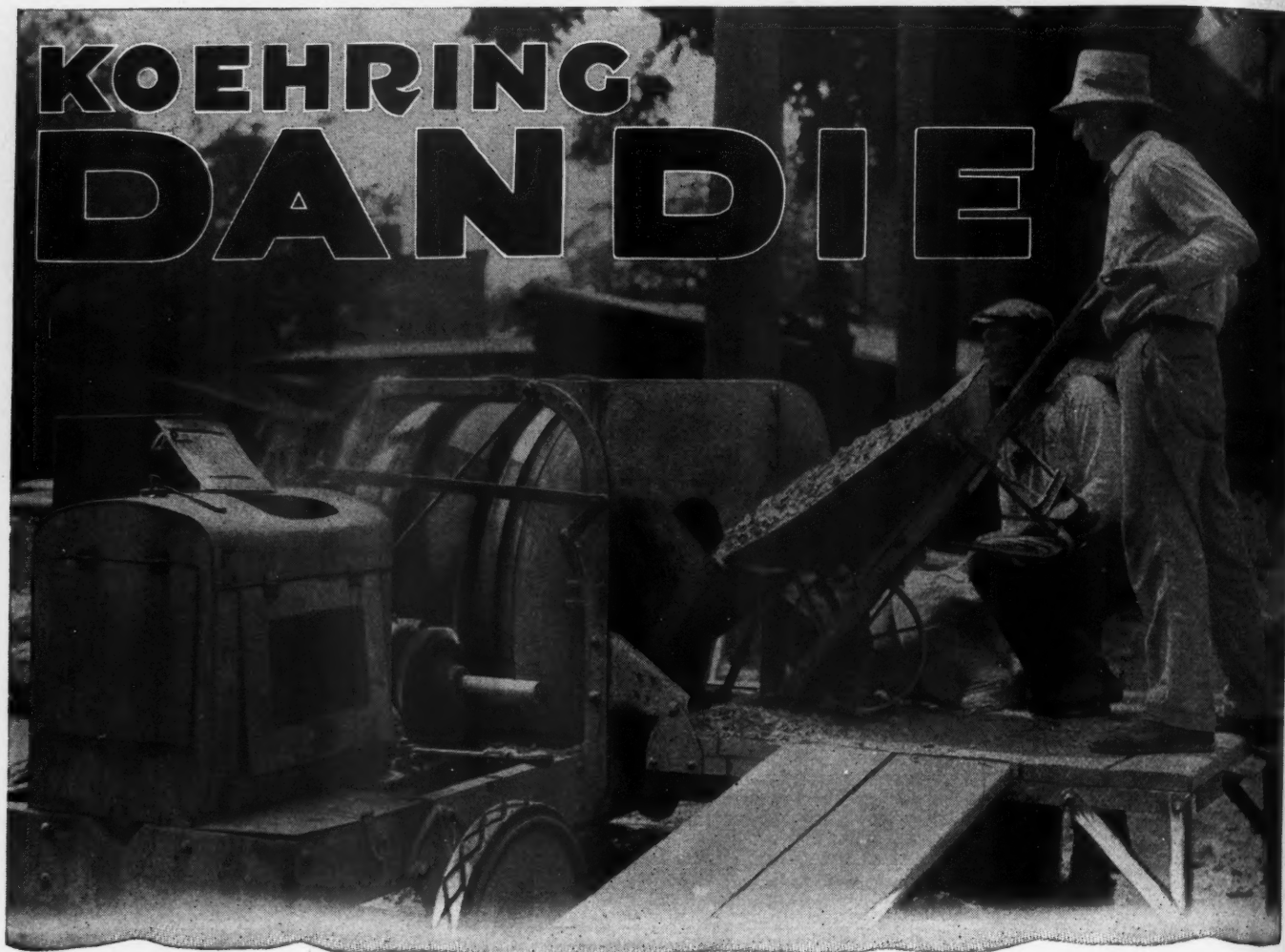
Gentlemen: Please send me circular describing the new Reid-Way Whirlwind Sander.

Name.....

Address.....

Ball bearing guide rollers front and rear insure ease of handling and uniform cut. The Reid-Way is instantly convertible from floor surfacer to bench sander or jointer.





## Fit a Dandie to Your Job!

**H**ERE'S the Dandie 7-S, for example — a one bagger with liberal room for mixing action!

Equip it with the fast charging skip, roomy enough, and right-shaped to chute materials into drum in a swift, clean slide. No clogging!

— or fit it with roomy low charging hopper and the strong sturdy platform that hinges up against drum in moving from job to job!

Give it the Koehring automatic water measuring tank, and batchmeter to time mixing period and you're equipped to meet strict specifications and quality tests!

However you equip your Dandie, you'll get fast charging and fast discharging!

You get the long-service reliability of superior construction, the easy portability and handiness of practical design!

Study the Dandie transmission — that in itself tells a wonderful story of service-life!

The more you know the Dandie — the more you'll recognize it as the *out-standing value in its class!*

### Get the Dandie Catalog

Take our word for it — you'll learn a lot to your advantage from the Dandie catalog — tell us where to send it.

### Dandie Mixers: 5-S, 7-S, 10-S

5-S single cylinder, 7-S two or four cylinder, 10-S four cylinder gasoline engine. Charging skip or low charging hopper and platform. Rubber tired or steel rimmed wheels. Comply with A. G. C. standards.

**KOEHRING COMPANY** MILWAUKEE, WISCONSIN

PAVERS, MIXERS — GASOLINE SHOVELS, PULL SHOVELS, CRANES AND DRAGLINES

Sales Offices and Service Warehouses in all principal cities

Foreign Department, Room 579, 50 Church Street, New York City

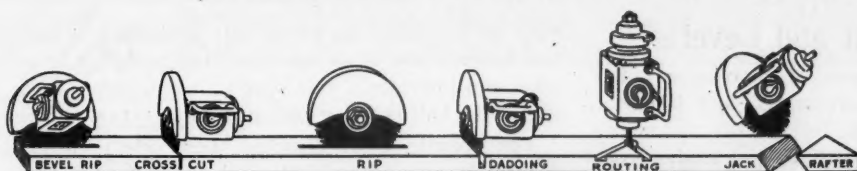
Mexico, F. S. Lapum, Cinco De Mayo 21, Mexico, D. F.

Division of National Equipment Corporation



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

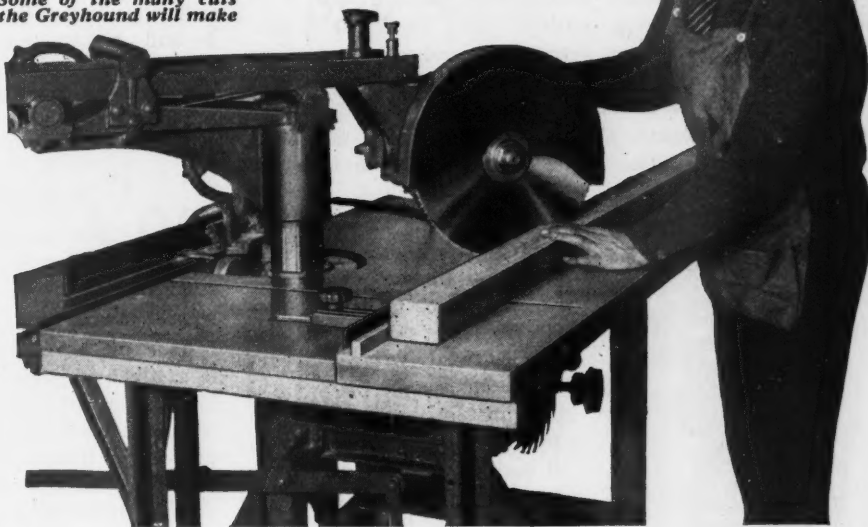
A5188-1



Some of the many cuts  
the Greyhound will make

# At Last!

*A real  
swing saw  
at a price  
anyone can pay!*



You need not be handicapped another season by old-fashioned woodworking methods. No longer does high price stand in your way. Here is the portable woodworker you

have been waiting for. A sturdy, practical machine that performs even better than more costly devices. A husky helper that will speed your work and multiply your profits.

## The Greyhound Slide Saw

### Speed Without Effort

Rips  
Cross Cuts  
Miters  
Bevel Rips  
Gains

Rabbets  
Dadoes  
Grooves  
Bevel Rabbets  
Cut Jack Rafters

Ploughs  
Routs  
Tenons  
Panels  
Shapes

Bores  
Grinds  
Sands  
Flutes

### Unequalled Capacity

Cross cuts 20" wide—Clears 4" stock with 14" Blade

Furnished with steel frame and hickory carrying handles, or with vibrationless table as shown below.



### The Only Woodworker with all these features

Slides freely on Ball Bearings. You could pull it with one finger. Motor mounted on universal knee with broad flat surface. No wobble! Accurate! Steel frame that will not warp or twist. 360 degree adjustment. Set for any angle in a few seconds. Can be used as vertical shaper without taking spindle out of motor.

Agents and Distributors! Some territory still open. Write for proposition.

The Woodworking Machinery Co., Inc.,  
250 N. 11th St.,  
Philadelphia, Pa.

I want to know all about the Greyhound Slide Saw and its low price. But this is not a promise to buy.

Mail Coupon TO-DAY  
For New Illustrated Folder and Price List  
We also make a complete line of single, purpose machines  
**THE WOODWORKING MACHINERY CO., INC.**  
250 N. 11th Street, Philadelphia, Pa.

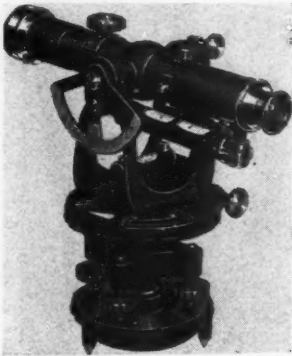
Name.....  
Address.....  
City.....State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### Combination Transit and Level

**A**N old, established manufacturer of instruments has brought out a new type of architects' and builders' transit, as shown in the illustration, for quickly and accurately running horizontal and vertical lines and angles from the same point, without disturbing any of its adjustments. It is a full size architects' and builders' transit with a 20 power telescope and long sensitive spirit level. It is also equipped with a graduated vertical arc and vernier reading to five minutes and clamp and tangent, large horizontal circle and guard with double vernier reading to five minutes and clamp and tangent, shifting center, combination base with trivet points. The entire instrument is finished in black enamel and bakelite lacquer.



**For Quickly and Accurately Running Horizontal and Vertical Lines and Angles Without Disturbing Adjustments.**

This instrument is very simple to set up and operate as a control lever guards against all errors and the telescope is brought exactly level or released for use in the vertical plane instantly, with the clamp and tangent, the same as on all high grade engineering instruments. The coarse corrugations on the leveling screws, pinion, etc., are also a decided advantage, especially in cold weather when gloves or mittens are worn.

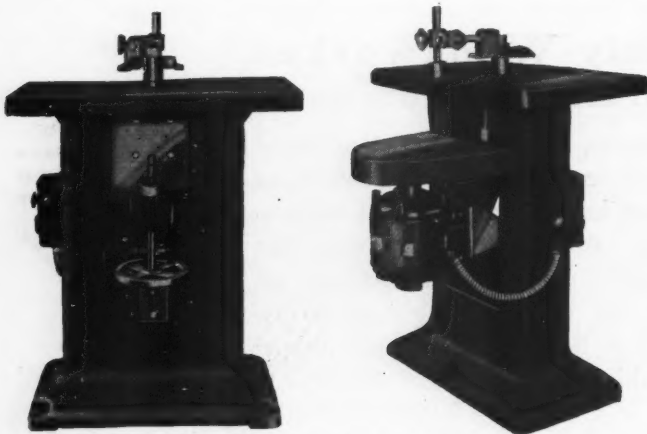
The instrument is substantially constructed and fills the

demand for a combination transit and level in a most satisfactory manner requiring no skill to use, and will answer all purposes. It is also furnished with a compass mounted in the base of the standards for rural use or where it is desired to determine true magnetic north and south.



### New Single Spindle Shaper

**H**ERE is a well built, single spindle shaper which is designed for accurate work. The frame is a heavy, one-piece cored casting which allows no vibration. The table measures 24 by 40 inches and is accurately ground



**Two Views of a New, Single Spindle Shaper Designed for Accurate Work, with a Heavy Frame to Eliminate Vibration.**

and finished, its height from the floor is 36 inches. The hole in the table has a diameter of  $4\frac{1}{2}$  inches.

A  $1\frac{1}{2}$  horsepower motor of 220, 440 or 550 volts is furnished as standard equipment. A two horsepower motor

may be furnished at extra cost if desired. The motor is ball bearing and is so mounted that both motor and spindle raise and lower as a single unit. Compensation for stretching of the belt is taken care of by one screw and thumb nut.

The spindle is of crucible steel, one inch in diameter, accurately ground and balanced. It is contained in a housing with two ball bearings. One set of knife and fill-in collars is regularly furnished. Special size spindles may be had at extra cost if ordered. The specially selected ball bearings are so mounted that they are dust proof and require little attention. This machine occupies a floor space 36 by 40 inches.



### A Light Powerful Sander

**T**HE floor sanding machine illustrated here has been designed by the makers of a well-known line of floor surfacing machines to fill the need for a low priced, light weight, sturdy and powerful floor sander.

This machine weighs only 115 lbs. A man can carry it easily and it can be taken from one job to another in any automobile, without removing the motor or disassembling the machine. It is equipped with two motors, one for propelling the machine and doing the sanding work and the other for operating the vacuum dust collector. This second motor is a special feature of this machine and it assures dustless operation all the time whether the machine is being moved backward or forward, and the suction never fails even if the main motor is slowed down by a heavy pull.

The sander is planned for use on old floors as well as new ones. It will remove 10 coats of varnish from a floor without the aid of neutralizers. It will surface right up to the quarter round without an additional side roller. It will surface at least 2,500 feet of new floorings per day or from 1,000 to 2,000 feet of old flooring, depending upon its condition, according to a statement from the manufacturer.



**This New Floor Sander Is Light, Powerful, Sturdy and Inexpensive.**

The guiding handle has been made adjustable so that a person of any height can use it conveniently. The sanding roller is equipped with a special paper holding clamp which makes it impossible for the sandpaper to become loose or wear in spots.

Double row self-aligning bearings are used on the sanding roller, thus eliminating vibration. Only two bearings require lubrication and when filled with light grease, need no attention for three to six months. Bearing housings are equipped with felt and cork gaskets, absolutely leakproof and dustproof.

The frame or chassis is made of one piece of chrome vanadium steel. It has no bolts, screws or rivets to loosen up and allow play. Every part is built solidly into the frame. The standard equipment includes galvanized iron pattern for cutting the sandpaper, a paper bending board, dust bag, 50 ft. of rubber trailing wire, 15 yards assorted varnish removing and finishing sandpapers, clamp wrench, enclosed snap switch, attachment plug and set of instructions.



*To Serve Their Industry  
Still Better*

# **MILES** **Concrete Equipment**

is now offered to a critical but  
appreciative industry with—

**New Refinements—**

**New Short-Cuts—**

**New Manufacturing Cost-Savers—**

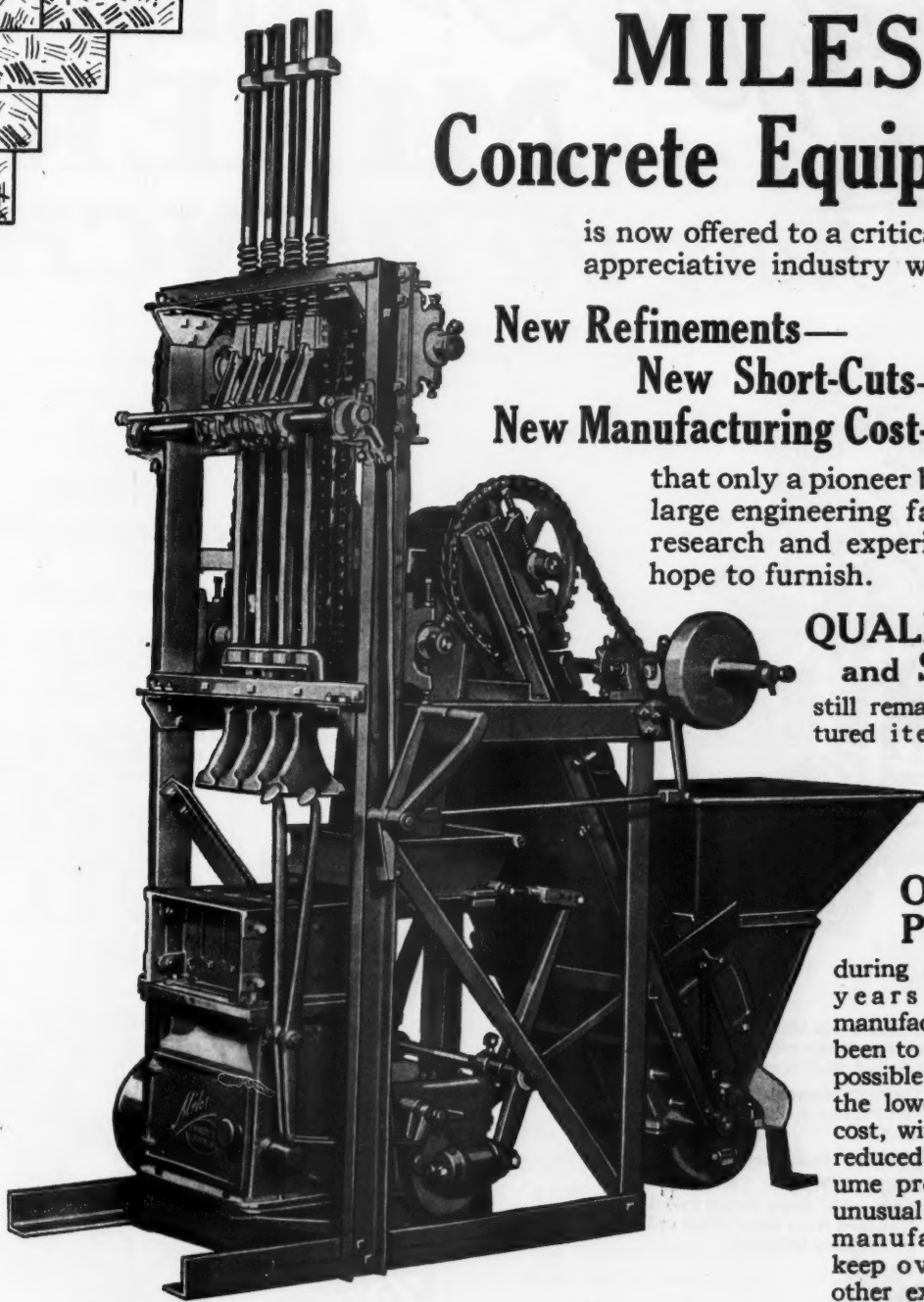
that only a pioneer builder, with  
large engineering facilities for  
research and experiment could  
hope to furnish.

## **QUALITY and SERVICE**

still remain as the fea-  
tured items in a line  
brought up  
to the latest  
minute—  
for—

## **OUR POLICY**

during over thirty  
years of successful  
manufacture has ever  
been to build the best  
possible equipment at  
the lowest possible  
cost, with prices ever  
reduced by large vol-  
ume production and  
unusual facilities for  
manufacture, which  
keep overhead and  
other expenses cut to  
the minimum.



ABOVE IS SHOWN A MILES COMPLETE POWER STRIPPER UNIT

## **THE MILES LINE IS COMPLETE**

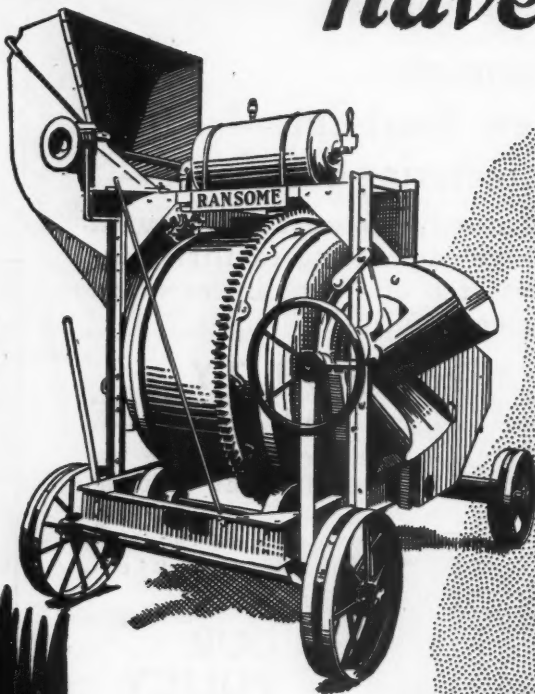
It includes face down block machines, hand strippers, power strippers, power tampers, elevators and feeders.  
See a Miles plant in operation before you decide and ask the user to tell you how it performs.

*Write for catalogue. This book contains much you should know and it is free*

**THE MILES MANUFACTURING CO., Dept. 6, Jackson, Mich., U. S. A.**



# 7-S & 10-S Standard Ransome Building MIXERS have the **PUNCH!**



FRONT AXLE — built of two 4" Channels, width  $1\frac{1}{2}$ " cold rolled stubs.

MAIN FRAMES — made of two 6" Channels.

MAIN ROLLERS — 12" in diameter.

*In This Corner We Have*

*The Ransome 10-S*

DRUM — 51" in diameter by 39" wide.

DRUM ROLLERS — 12" x 2 $\frac{1}{2}$ " — car wheel iron, Timken Roller Bearings on Drum Rollers.

CONTROL — One set of levers located at drum end of mixer.

GASOLINE ENGINE — LeRoi or Novo — 4 cylinder.

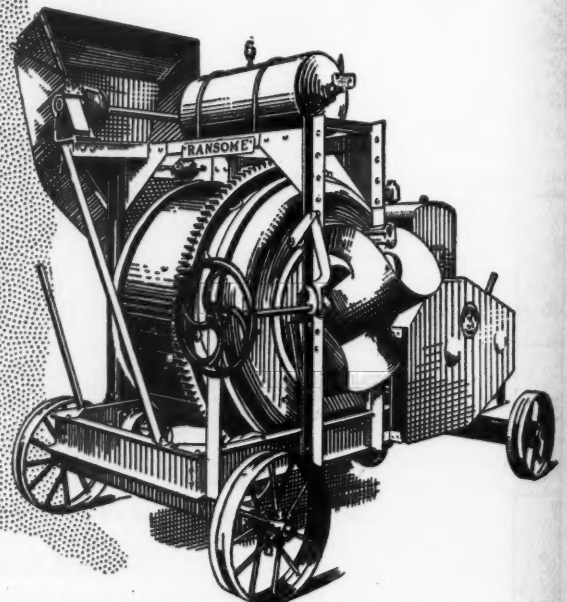
WATER MEASURING TANK — 16" x 40" — capacity, 37 gallons.

*Ransome—the first mixer in the ring  
—the last to enter the repair shop.*

Fast, rugged mixers that knock out the work in record time—that is the general reputation of Ransome 7-S and 10-S among mixer "fans". Look over the measurements of the 7-S—then you'll see why it has the "guts" to stand up and "take" it.

DRUM — 45" in diameter by 35 $\frac{1}{2}$ " wide.

DRUM ROLLER TRACKS — 2" wide— $1\frac{1}{4}$ " thick, forged rolled and turned from solid billets of locomotive tire steel.



**Mail this Coupon!**



**Ransome Concrete Machinery Company**

Dunellen

1850—Service for 79 Years—1929

New Jersey

Get ALL of the facts about these fast, husky Ransome Mixers. Learn how they've performed—what they're made of!

**RANSOME CONCRETE MACHINERY COMPANY**  
Dept. A. B. . . . . Dunellen, N. J.

Without obligation, send me full information about the ☐ 3 $\frac{1}{2}$ -S Tilter; ☐ 5-S Builder;  
☐ 7-S Builder; ☐ 10-S Builder.

Name \_\_\_\_\_

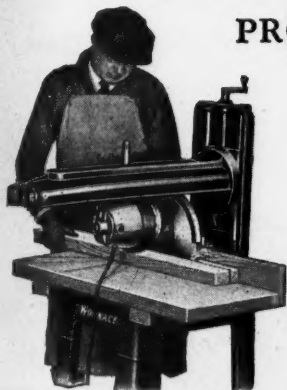
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# WALLACE RADIAL SAW

PRODUCT OF J. D. WALLACE & CO.



Ripping



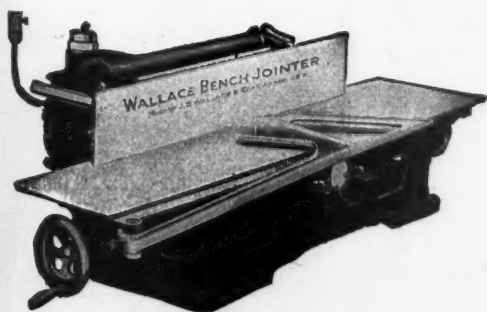
Cross Cutting



Bevel Cutting



## Greatest Value Ever Offered



### Wallace Bench Planer and Jointer

A compact and highly efficient machine—easily portable with ample power to handle all classes of work.

**Special reduced price.....\$140.00**

Here is a high grade machine built to take care of all cutting operations—any angle—compound meters—cutoff—ripping, dadoing—tenoning and routing, shaping, fluting, boring, sanding—practically all operations required in the shop or on the job.

Send the coupon for full description and time payment plan

Amazing low price  
Sold on Easy terms  
if Desired



J. D. Wallace & Company  
136 S. California Ave., Chicago, Ill.

Send full description of Workace Radial Saw and time payment plan.

If interested in other individual portable machines check here ☐

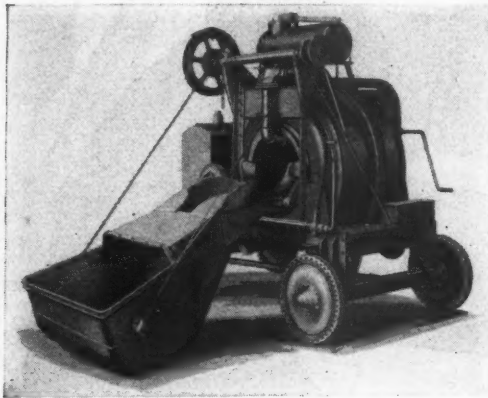
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### Improved One Bag Mixer

**A**N improved one bag mixer has been announced by a well-known manufacturer. This new job was shown for the first time at the recent Road Show in Cleveland and attracted much attention from contractors.

While speed in mixing and moving is emphasized by the manufacturers in their bulletin on this mixer, yet sturdiness



**Speedy in Operation and Sturdy in Construction Is This New One Bag Mixer.**

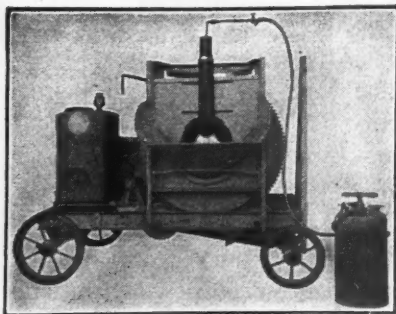
of construction and long life have been given every attention in building it. Some of the outstanding features are: Timken tapered roller bearings; spring mounted wheels to absorb the shocks; interchangeable rubber-tired or steel wheels; diamond type roller chain drive, fully enclosed and constantly lubricated by running in a bath of oil, and the rail-tracks on which the drums revolve, which are guaranteed for the life of the mixer. A well-known rapid water tank is also standard equipment.

tion and long life have been given every attention in building it.

Some of the outstanding features are: Timken tapered roller bearings; spring mounted wheels to absorb the

### Efficient Concrete Heater

**F**OR cold weather work some sort of a concrete heater is a very necessary piece of equipment and the one shown in the illustration will be found convenient, practical and economical. It is attached directly to the mixer, as shown, and is operated with kerosene. It will produce hot concrete of from 70 to 90 degrees in zero weather. It can be attached easily to almost any non-tilting, drum type mixer on the market.



**Concrete Heater Attached to a Mixer in Operation, Assuring Smooth, Even, Strong Work.**

freeze. This insures smooth, even and strong work.

This heater is available in three sizes for mixers having a capacity of three to five cubic feet, for mixers of seven, 10 or 14 feet and for mixers of 21 or 28 feet capacity. The oil consumption varies from 1½ gallons per hour with the small size to three gallons with the largest size. Each heater is equipped with an oil tank of ample capacity and a hose in addition to the clamps for attaching to the mixer.

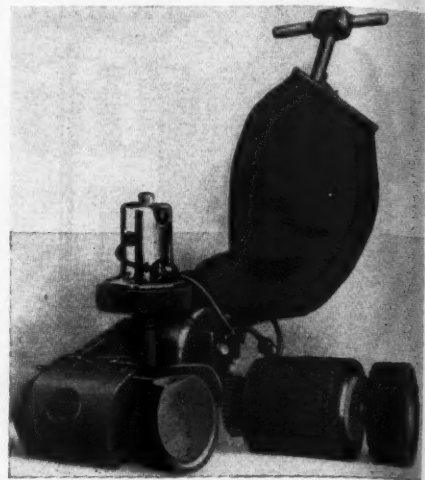
With it in use, only in extremely cold weather is it necessary to reduce the speed of mixing and then only 10 to 30 per cent, according to the manufacturers. Concrete heated in this way remains warm for from 48 to 56 hours after being poured and will harden and set before it has a chance to

### A Sander with Side Roller

**A** COMBINATION sanding and polishing machine which is, according to the manufacturers, meeting with a big demand among contractors, painters, realty owners and others, who find it highly practical and economical, has lately been further improved. Many con-

cerns which have a large amount of work to do and only one man to take the machine from job to job and operate it, find this small combination machine most practical.

The latest improvement on this machine is a side roll attachment that is described as being not only practical, but fool-proof and which now makes it possible to sand right up to the base, eliminating all hand work with the exception of about three inches in the corners. This adjustable side roll will operate on both sides of the machine and can be changed from one side to the other in two minutes, it is stated.



**Side Roller on This Sander Gets Up Close to Base.**

This machine is ruggedly built

and easy to operate. It does not require a skilled operator and is strictly a one man machine, doing all the work of 10 men using hand methods. It is equipped with a ¼ H.P. motor, 25 feet of electric cable, a silent chain drive, ball bearings, an adjustable handle that can be raised or lowered and disconnected entirely in one minute, adjustable wheels with rubber rims, and a separate, ⅓ H.P. motor which takes up absolutely all the dust. The total weight of this machine is only 85 pounds.

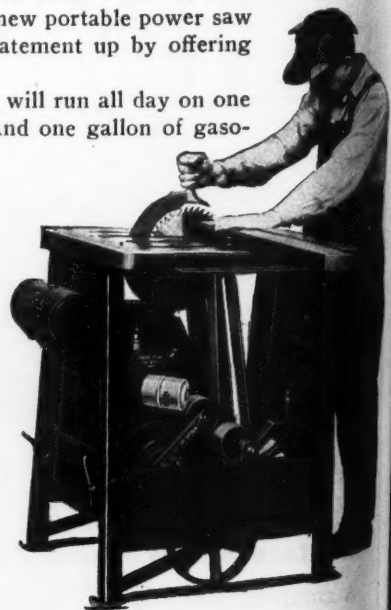
### This Saw Saves on Costs

**O**NE man and the saw shown here will do the work of 10 men with hand saws. This is what the manufacturers claim for their new portable power saw and they back this statement up by offering a free trial.

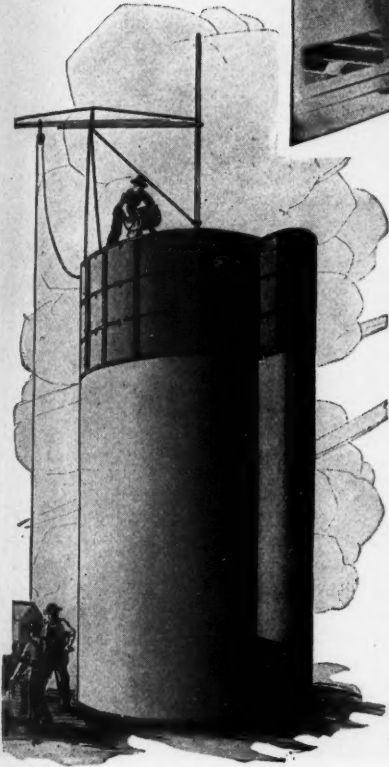
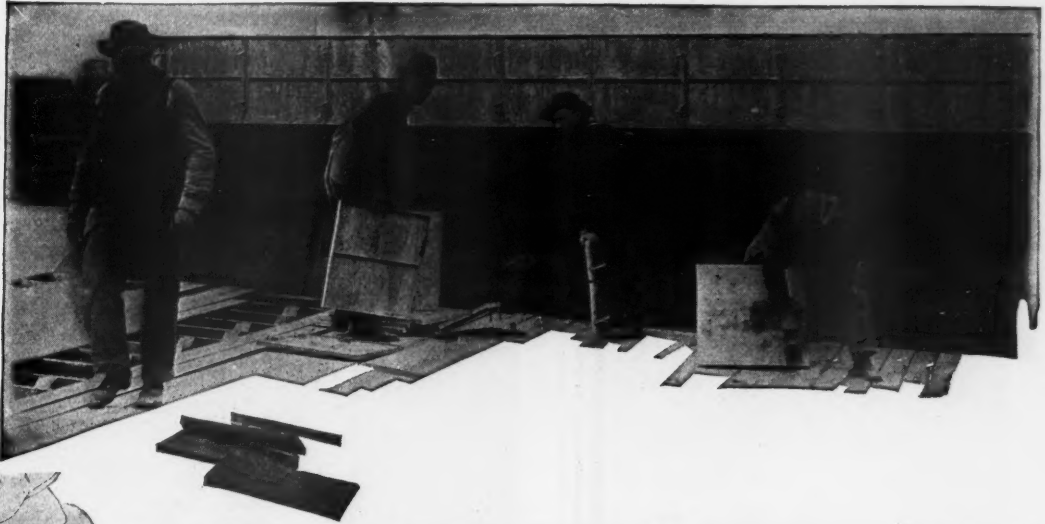
This power saw rig will run all day on one gallon of gasoline. And one gallon of gasoline costs less than 25 cents. The saw will make possible a saving of 10 to 12 per cent on the entire building cost on the average sized bungalow or other building, according to figures taken from an actual report of a contractor who used the saw in building more than 500 houses, it stated.

This saw is designed to perform many useful operations. It cross-cuts, rips, mitres and dados. With this saw you can rip 3¼ inch material, green, wet or unseasoned—as fast as you can feed it to the blade.

Such a saw will enable the user to make a saving of three to four weeks' time on each building costing \$3,500 to \$4,000 in addition to the savings of 10 to 12 per cent on the actual building cost.



**A Power Saw, Gasoline Operated, Which Gives Economical Service.**



## WHAT A DIFFERENCE METAFORMS MAKE *in* CONSTRUCTION COSTS

!

**NO TIME LOST, NO LABOR LOST AND NO  
LUMBER WASTED ON ANY CONCRETE JOB**

## THE SAVING IS AMAZING

Invest the amount you spend on lumber for one year, in METAFORMS and eliminate that expense permanently. That money becomes "velvet" along with other profits you reap by using METAFORMS. Ordinary, unskilled labor can easily set them up. Adaptable to all types of monolithic and circular concrete construction.

Each standard unit is a square of smooth, 14-gauge sheet metal 24"x24" in size, stiffened and held perfectly flat by angle irons. Fractionals from 2" to 22" make the forms adjustable to any building dimensions.

METAFORM circular outfits for silo, tank, reservoir and grain elevator construction are just as easily handled by unskilled labor without the use of scaffolding and in about half the time employed by other methods.

We also manufacture metal forms for road and sidewalk construction. Metaform Road rails are quickly and easily set in place forming a track for the wheel of the finishing machine. They will not get out of line and will stand terrific strains and weights. For a perfect job in less time and less cost use Metaforms.

*Our illustrated circulars on all classes of Metaform Construction are awaiting your request. Send the coupon today*

**METAL FORMS CORPORATION  
MILWAUKEE, WISCONSIN**

**METAL FORMS CORPORATION  
Milwaukee, Wis.**

Please send me your illustrated circular on  
Metaform construction.

Name.....

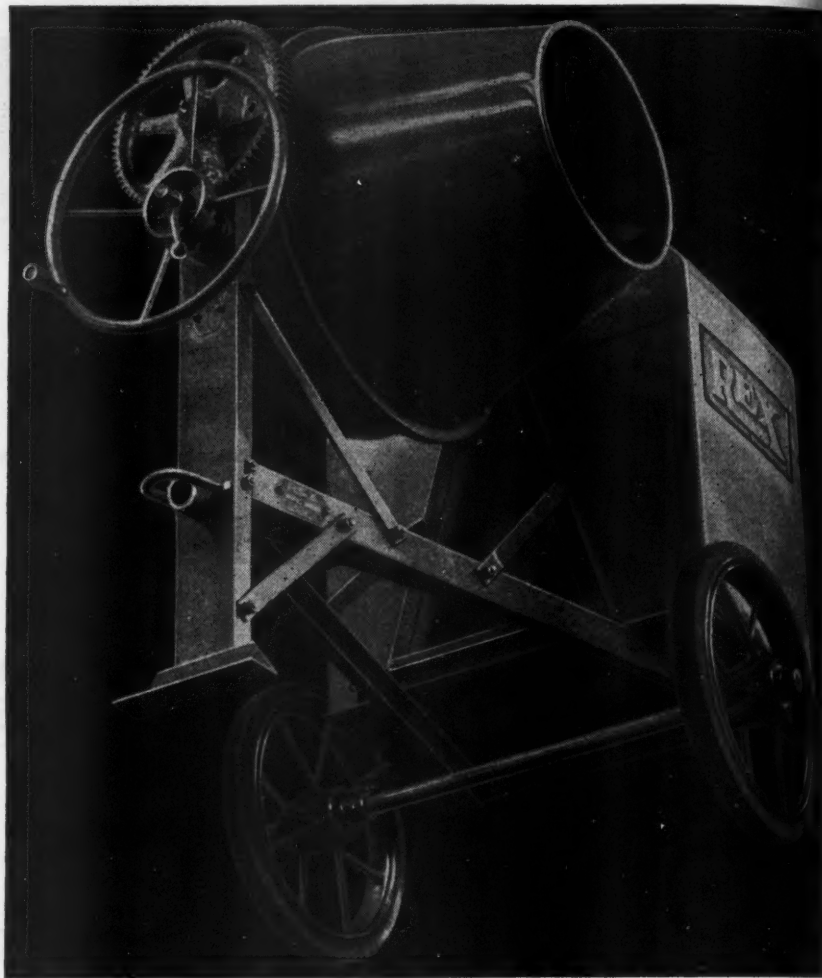
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City.....State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# WHO BUT REX



## COULD BUILD Such an Outstanding 1/2 BAG TILTER VALUE? . . . .

**W**HO BUT REX could set the small mixer standard for 1928—and then build a new and greater 1/2-bag tilter for 1929?

For in the new Rex Tilter, Rex engineers give contractors a compact, sturdy little mixer that makes current competitive design and performance obsolete.

And only Rex production facilities could produce such an advanced machine at a price below average.

Before you buy a new 1/2-bag machine—or drive your old machine through another season—look into this. It sets a new standard of value for mixer-buying dollars.

Cantileversprings make riding easier and towing safer . . . new positive tilt lock can't loosen . . . Timken in drum spindle . . . reinforced drum lip that shovels won't nick . . . drum with the easy shoveling height—dumps cleanly into any barrow . . . wheel and gear tilting mechanism tilts drum faster and easier . . . sturdy frame with no bric-a-brac to loosen . . . counterbalancing makes moving easy.

*This tilter also equipped with power loader*

CHAIN BELT COMPANY, 721 Park Street, Milwaukee, Wisconsin

# REX MIXERS

(Reg. U. S. Pat. Off.)

### CHAIN BELT COMPANY

721 Park Street, Milwaukee, Wis.

Send me Catalogs on the mixers I've checked

1/2-bag tilter <input type="checkbox"/>	2-to 3-bag 14-S <input type="checkbox"/>
1/4-to 1-bag 5-S <input type="checkbox"/>	6-bag 28-S <input type="checkbox"/>
1-bag 7-S <input type="checkbox"/>	12-bag 56-S <input type="checkbox"/>
1-to 2-bag 10-S <input type="checkbox"/>	27-E Paver <input type="checkbox"/>

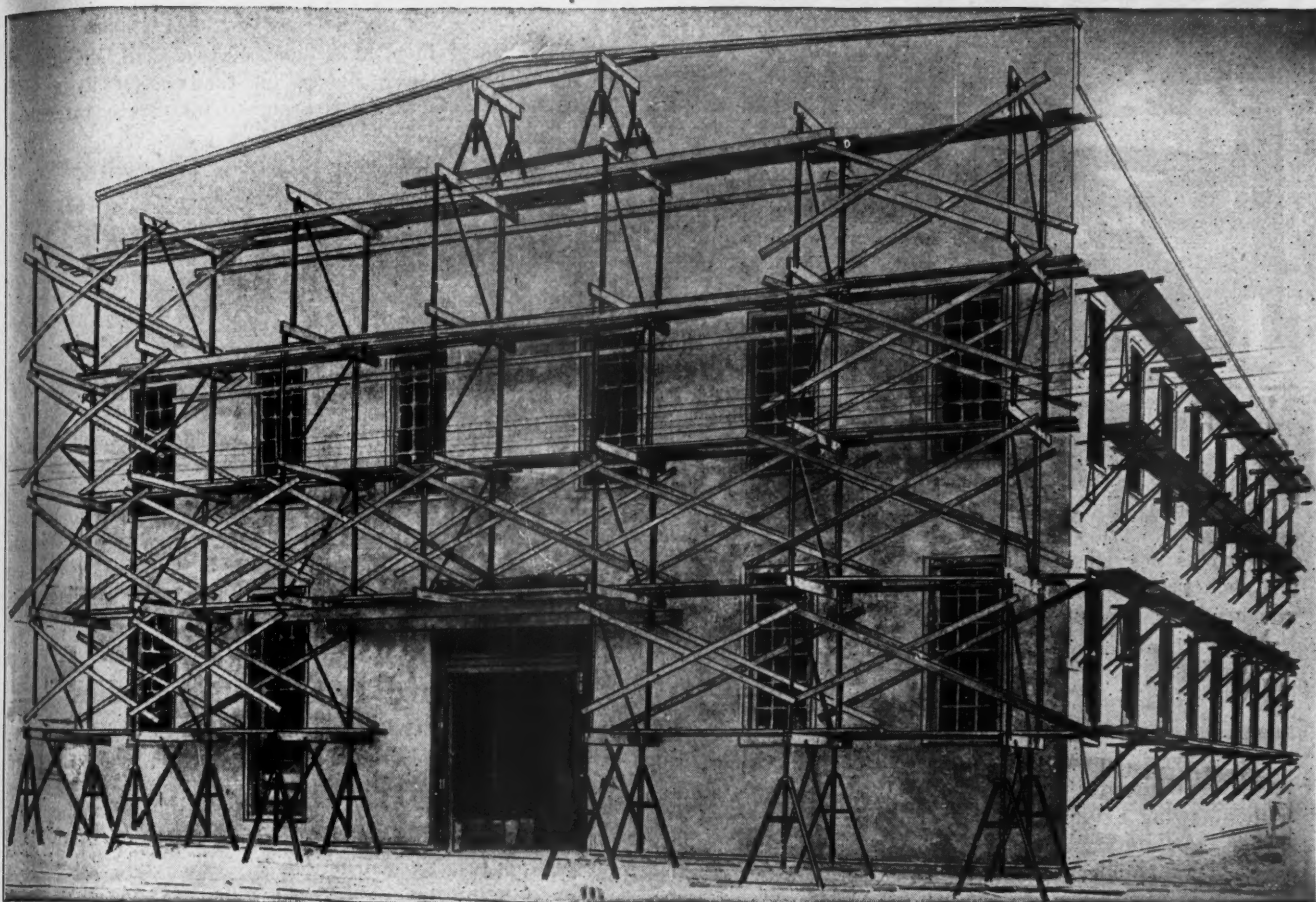
Name.....

Address.....

City..... State.....

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

# Trouble Savers



**Adjustable Steel Trestles**—On front of building, Adjustable Steel Trestles form first tier. Above are four tiers of sectional Steel Scaffolding. Nail attached brackets for stuccoers and carpenters on side.

## Why

spend as much money building wooden scaffolding for one job, as for **Trouble Savers** which are good for 100 jobs or more?  
risk accidents?  
risk fire hazards?

**Trouble Saver** Steel Scaffolding is erected and dismantled so quickly that it saves its cost on every job, and is as good as new after ten years' use. Same equipment can be used outside as inside, and moved from one portion of a building to another. **Absolutely safe!**

Check items on which you wish particulars, fill out the coupon and mail today. By return mail will come full information and details of our 30 day **FREE TRIAL OFFER**.

1101 N. Governor St.,

**The Steel Scaffolding Company**

Evansville, Ind.



**Trouble Saver Studding Brackets** support a ton. Will not bend.



**Trouble Saver Nail Attached Brackets** support a ton. Held by four nails.



**Trouble Saver Bolt Brackets** approved by State Industrial Commissions.



**Trouble Saver Adjustable Steel Trestles** (patented).

Quickly adjusted to desired height, 8 sizes. Each size adjustable from 4 to 16 different heights, giving a range from 16 inch to 12 feet by 3 inch lifts.

## Trouble Saver Steel Products

Studding Brackets  
Nail Attached Brackets  
Bolt Brackets with Safety Railing  
Adjustable Trestles

Ladder Jacks  
Wood Shinglers  
Mortar Board  
Stands  
Sectional Steel Scaffolding

# Everlasting Money Makers!

Name.....Address.....  
City.....State.....



### A New Versatile Saw

**A** NEW, direct motor driven saw, which travels through the work instead of the work being pushed against the saw, while the stock lies flat on the table, will be found a valuable, money saving piece of equipment for the contractor. It is a machine which handles all types of work, which is easily and quickly adjustable, easily portable, accurate, sturdy and powerful.

The one machine handles all cutting operations, any angle, compound miters, cutoff, ripping, dadoing, tenoning and routing, shaping, fluting, boring, sanding and, in fact, practically every operation done in building, yard or woodworking plant.

This machine has a radial arm mounted on a turntable 10 inches in diameter on the upright column of the machine. This makes it possible to turn the arm and lock it securely in any desired position for bevel cutting. This vertical, turn table carriage

slides on two, accurately machined, one inch, vertical, steel bars in the upright column and is actuated by a screw in the vertical column so that the arm may be raised and lowered as desired. It has a maximum vertical travel of 5¾ inches for gauging the depth of the cut according to the height of the stock above the table.

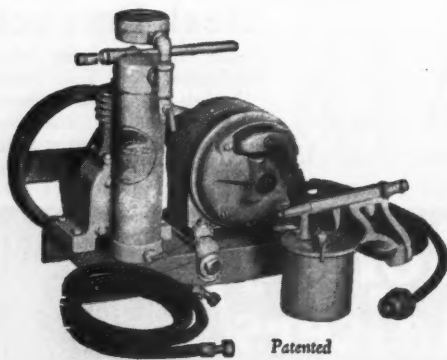
The vertical column is also mounted on a 10 inch turntable at the base so that the column supporting the arm can be swung and securely locked in any position for angle cutting. The two heavy steel bars, on which the motor travels horizontally, are accurately machined and are set at the center distance of six inches, assuring rigidity without swing or spring. A ¾ H.P. motor furnishes the power. A safety guard covers the unused portion of the saw. Two handles are conveniently located for guiding the saw in the various operations. Each machine is supplied with one, eight inch combination cross-cut and rip blade. Other blades, dado and router heads are supplied as extras.

### New Portable Airpainting Unit

**A** NEW and compact air unit, which is low in price, furnishes a practical and efficient, light, portable unit with which a large variety of attractive decorating, air painting, and finishing can be produced. This unit is especially adapted to touching up, repainting, shading and lacquering

any article in the house, to light window trimming or to card and sign work. Furniture stores, department stores as well as fixture and electrical stores can refinish damaged articles at a big saving.

These low pressure sprayers represent the latest develop-



Light and Easily Portable This Air Painting Unit Has a Wide Field of Use.

ments in low priced sprayers. They operate on low pressure from a few pounds and up with lowest air consumption.

The uniform fan spray turns in any direction and can be adjusted for small or large spray by simply turning air-cap in for wide fast spray and out for smaller spray. It has a patented clamp-tight cover, an unbreakable metal cup, a convenient pistol grip and leak-proof valve, and is simple, strong and serviceable.

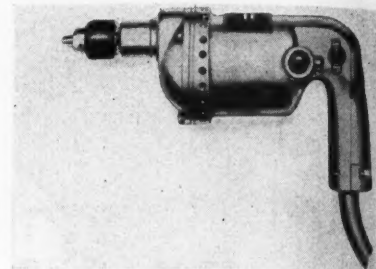


### New Light Duty Drill

**T**HE new, ¼ inch, light duty, electric drill, shown here, has recently been placed on the market by a well-known manufacturer. It is designed for use by carpenters,

mechanics, electricians, plumbers, automotive shops and, in fact, by every workman who uses tools.

It is not intended for continuous production drilling, but is a strong serviceable tool for intermittent work. Being light and compact, it is an ideal drill for the tool kit. The handle design and reduced length make it especially useful in close corners. Its cost is low. It is equipped with a universal motor operating on either direct or alternating current, hardened alloy steel gears, chuck, cable and attachment plug.



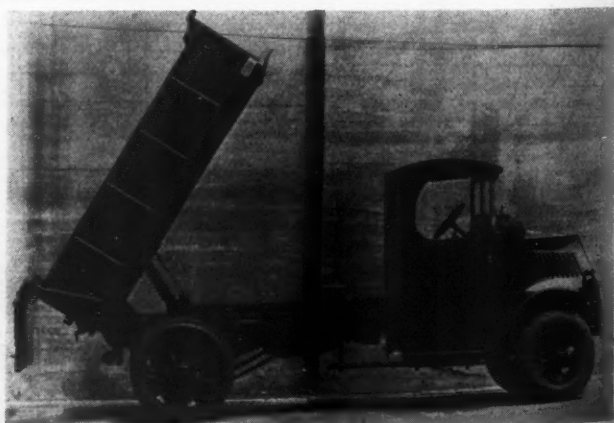
Here Is an Electric Drill Suitable for Carrying in the Regular Tool Kit.



### Standard Truck Dump Bodies

**A** WELL-KNOWN manufacturer of trucks is now prepared to supply truck operators in the contracting and building supply business with a line of standard dump bodies which will cover the major portion of dump truck requirements, and meet the exacting demands of the field for ruggedness of construction.

The announcement of the company states that all of these bodies are built of No. 7 gauge sheet steel, and are constructed to taper four inches from front to rear, a feature which insures rapid emptying of body, even with sticky material. The bodies have full length six inch running boards with round corner front, which makes for a smooth rub rail, the full length of body, and provides a substantial front corner body bumper. Front headboard, tailgate posts and gate all extend well above the body sides proper so that sideboard extension and large opening tailgate are provided for.



One of a New Line of Standard Dump Now Available on a Well Known Line of Heavy Duty Trucks.



These sturdy brackets are so well made and so perfectly designed that they will support enormous weight as firmly and safely as the ground under your feet.

And speedy! Just four nails in the studding and the bracket is put in place. It can be taken down just as quickly and transferred to another job.

You can rely on Everlasting Building Brackets to give complete satisfaction under all conditions. They are so much more efficient and economical than the old methods of scaffolding that they will increase your profits on any job.

*Your dealer has EVERLASTING Building Brackets, or he will gladly get them for you. The coupon below will bring catalog, specifications and prices on our full line of building brackets.*

*Mail it today*

**HUBENY BROTHERS, Inc.**  
600 First Avenue  
ROSELLE, N. J.

**Mr. Dealer:**

We supply the highest grade steel bracket at a very popular price. A definite dealer policy guarantees fair dealing and pleasant relations.

*Write for details*

**HUBENY BROTHERS, Inc.**  
600 First Avenue, Roselle, N. J.

Please send me complete information on your line of Building Brackets.

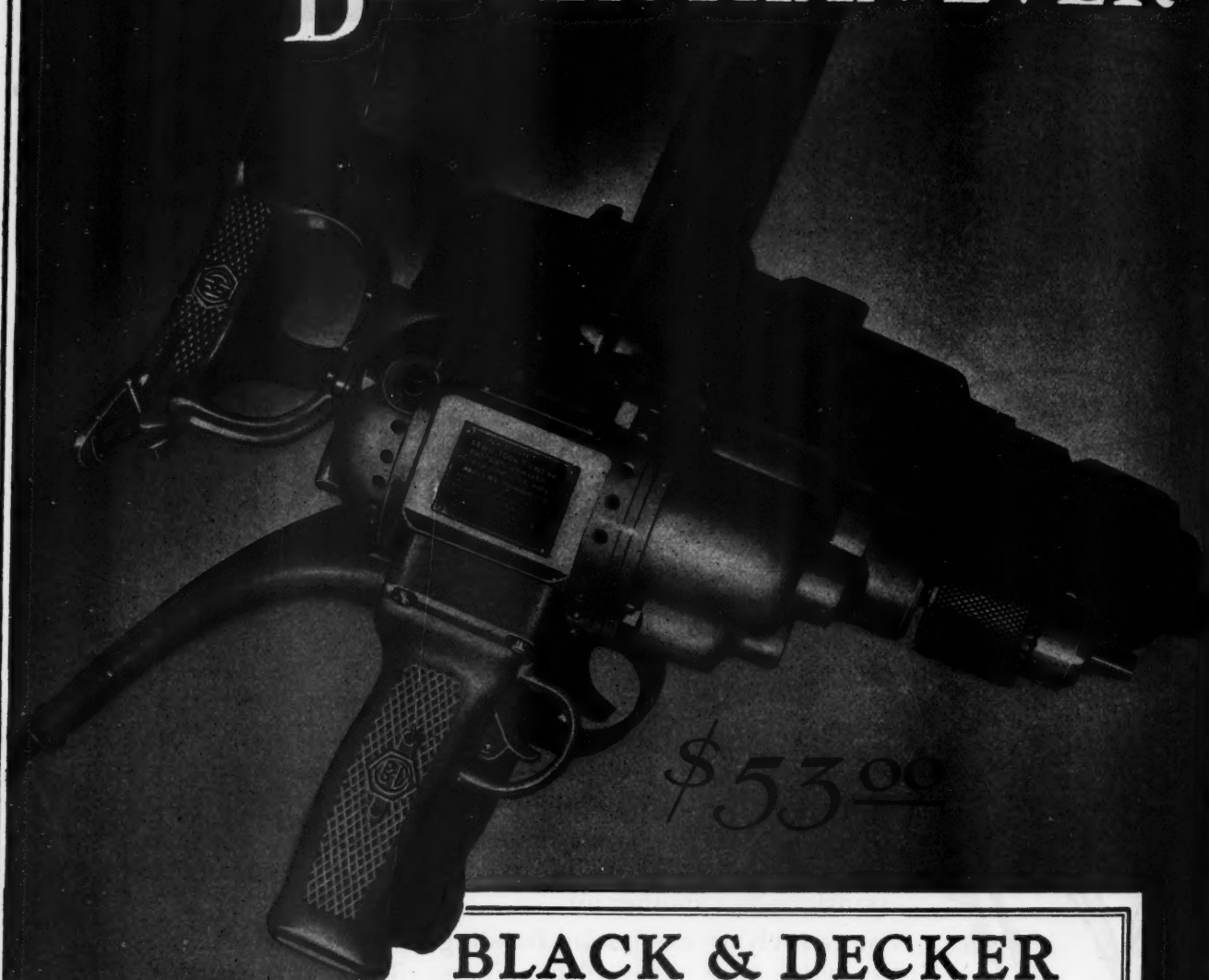
Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_ State \_\_\_\_\_



# STILL THE LEADER — BETTER THAN EVER



## BLACK & DECKER

### 1/2- Inch Portable Electric Drill

*"With the Pistol Grip and Trigger Switch"*

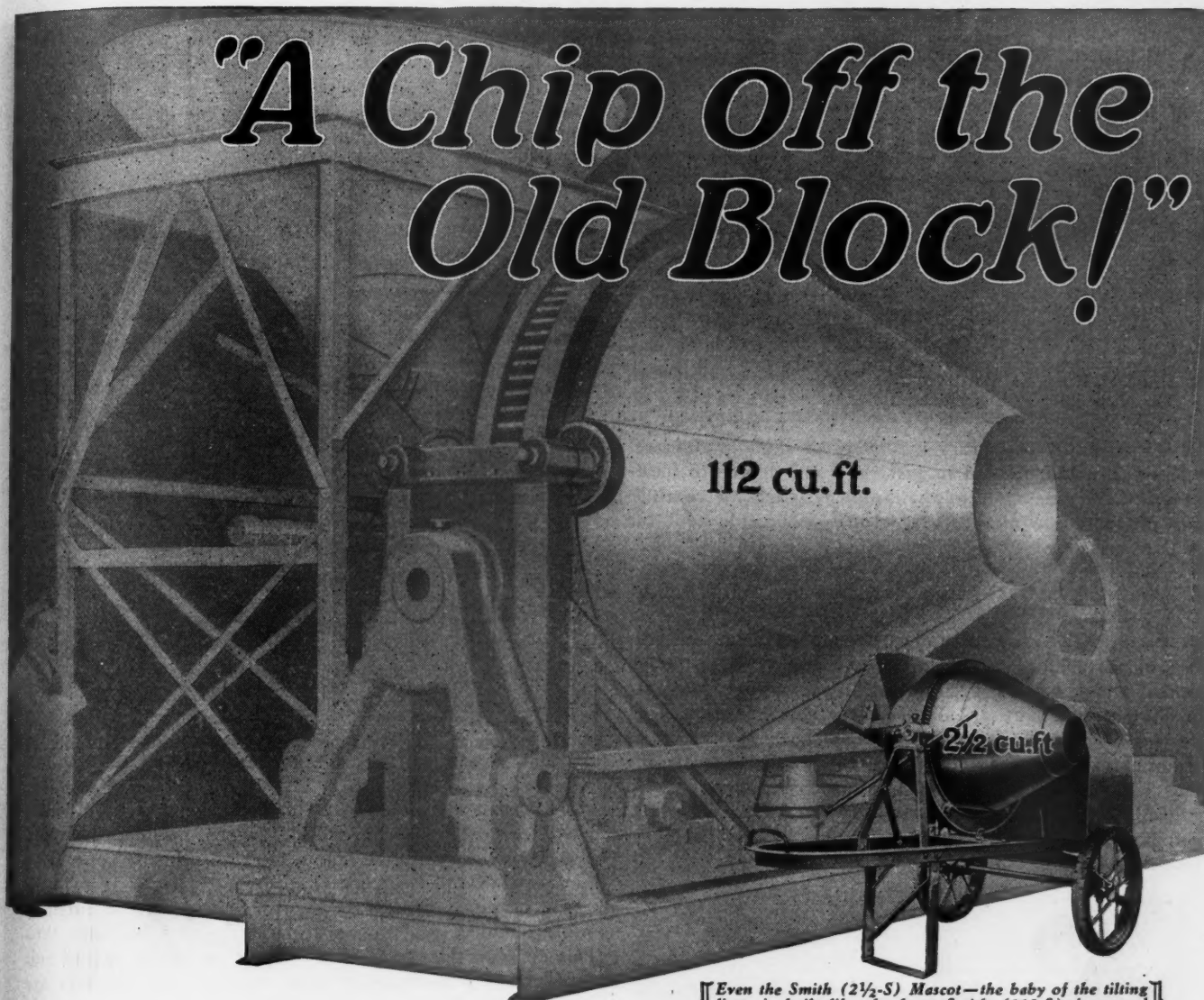
The most popular make - -

The most popular size - -

More have been produced than any  
other make or size.

Your Jobber Can Supply You

# "A Chip off the Old Block!"



[[ Even the Smith (2 1/2-S) Mascot—the baby of the tilting line—is built like the huge Smith (112-S) four yard tilter, the largest mixer in the world. ]]

**Smith half-bag mixers** have all the important characteristics of the BIG Smiths that have proven so outstandingly successful on the world's greatest construction projects — Muscle Shoals, Conowingo Dam, Cascade Tunnel, Pardee Dam, Coolidge Dam — and many others.

The same tilting drum construction, the

same "end-to-center" mixing action, the same ease and speed of discharge, and what is equally important, the same Smith quality throughout — make these little mixers BIG Smiths in everything but size.

Prominent engineers specify Smiths for the big projects. And the same type of mixer is available to you for your small every day jobs. Why be satisfied with anything less?



These better and more dependable half-bag mixers cost no more than ordinary mixers. And remember, they have the handy feed chutes as standard equipment—the only small mixers with this feature.

Mail the coupon below for complete descriptive information.

# SMITH MIXERS

THE T. L. SMITH COMPANY, [Division of National Equipment Corporation] 1026-32nd Street, Milwaukee, Wisconsin

Please send me complete descriptive information on your Small Mixers.

Name..... Address..... City..... State.....

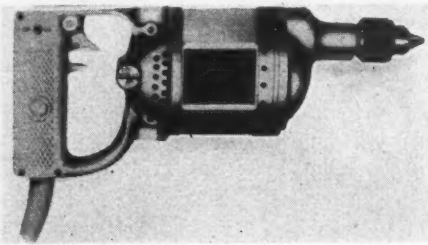
A5187-1-SM

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### Electric Drill Price Cut

A WELL-KNOWN manufacturer of electric tools has announced a reduction in the price of its  $\frac{1}{4}$  inch, light duty drill, shown in the accompanying illustration. This



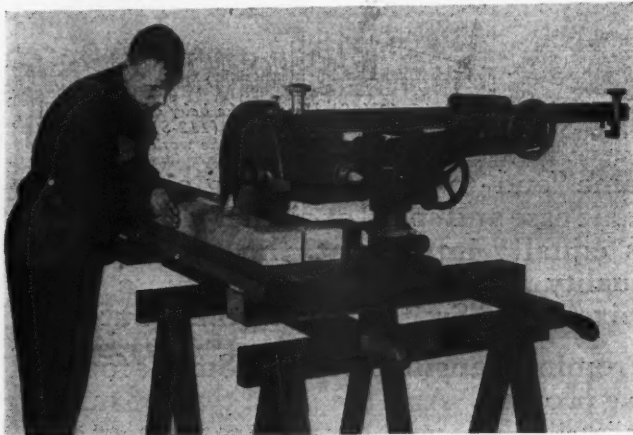
A General Purpose Drill for the Tool Kit Now Sold at a Reduced Price.

is a general purpose drill for light work and is especially adapted for workmen to carry in their tool kits, out on the job. It is equipped with a universal motor, operating on either A. C. or D. C. current. The gears are made of high grade steel scientifically heat-treated to just the right degree of hardness and toughness. While it is not designed for continuous production work, it is a strong serviceable tool for odd jobs.



### An Improved Type Woodworker

UNUSUAL ease of operation is claimed for a new type of portable, overhead, swing saw and universal woodworker which has just been placed on the market. Because of the introduction of ball bearings, not before used in devices of this kind, it is said that much less effort is required to guide the tool across the work. Among the jobs which this machine will perform are ripping, cross-cutting, beveling, mitering, compound mitering, rabbeting, gaining, ploughing, dadoing, grooving, routing, shaping, tenoning, fluting, boring, paneling and sanding.



A New Type of Construction Makes for Ease of Operation of This New Swing Saw and Woodworker.

With a 16 inch saw it will cross-cut material five inches thick and 18 inches wide. It cuts two by eight inch jack rafters at a 60 degree angle. The ripping capacity handles material four inches thick and 14 inches wide. The saw, or other tool being used, is mounted right on the shaft of the motor, giving the power advantage of direct drive.

The motor is attached to a universal knee which permits it to be turned or tilted in any direction with a full 360 degree of adjustment. This knee, in turn, is firmly fixed to a sliding section of "I" beam which moves back and forth on ball bearings. Because of the broad face of the bearing on the universal knee, the sturdiness and balance of the sliding mechanism, and the staunch construction of the entire machine, it is claimed that vibration is eliminated with a consequent gain in accuracy of work.

The table is equipped with hickory handles for ease in

carrying. For those who prefer a stationary machine, a steel angle stand can be furnished, with underslung rip saw. Less than a minute is required to change the machine to perform any of its operation, it is said. Accuracy is assured by convenient locating pins. All parts are interchangeable. This machine can be obtained with any size motor from  $\frac{1}{2}$  H.P. to five H.P.



### New Heavy Duty Truck Line

A NEW line of heavy-duty motor trucks with respective ratings of  $2\frac{1}{2}$ ,  $3\frac{1}{2}$  and 5 tons has recently been developed. The new trucks are being made in both the chain drive and double-reduction types with the exception of the 5-ton size, which is of chain-drive type only.

Several important new features are incorporated in the



A New Line of Heavy Duty Trucks in Which a Number of New Features Afford the Operator Greater Service.

design of these trucks, some of which are: new and more powerful engines, four-wheel brakes, single dry-plate clutches with vibration dampers and transmissions with five forward and two reverse speeds.

The engines consist of five independently maintained sub-assemblies, which greatly simplify servicing and thus help to keep the truck on the job. The entire engine unit of each truck is clean-cut and compact, and all parts are easily accessible, making possible a quick check-over. It has an overhead valve and camshaft arrangement, which is designed so that valve grinding is a simple bench job, and also made so that lubrication is carried to every moving part.

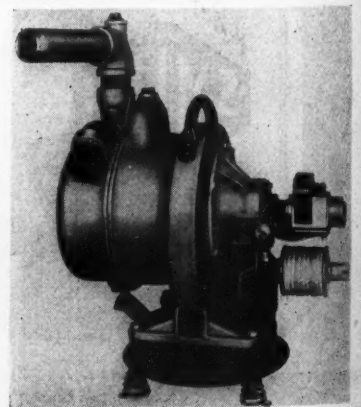
Lubrication of the engine is accomplished by means of a gear type oil pump which completely supplies all moving parts, assuring longer life and added performance to the engine.

The trucks are capable of developing an abundance of power for the hard pulls and speed for long hauls on the highway. Reductions in low gear are 100 to 1, giving ample power for pulling out of the toughest places.



### Portable, Self-Priming Pump

UNDER this same heading a description was published on page 134 of the March issue, the illustration accompanying which was, by mistake, printed with the wrong side up. This did not give an accurate idea of what the pump really looks like and we are, therefore, republishing the illustration, herewith, in the proper position.



Unusually Light Weight, High Quality and Efficiency Will Be Found in This New Pump.

# Do The Whole Sanding Job

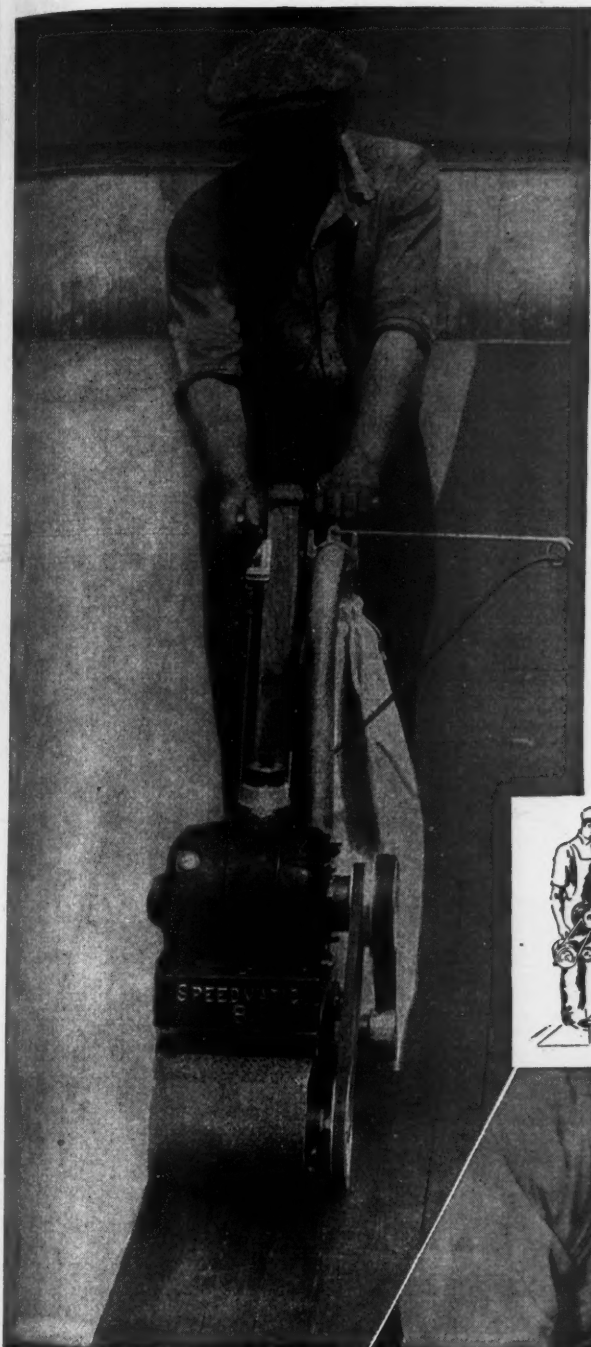
—with these two efficient machines, Mr. Contractor, and you will find your floor costs reduce while your profits increase.

For the larger areas you want a machine that will give fast clean cutting with minimum wear of abrasive. You also want a machine that gives a smooth finish without chatter marks or ripples, that one man can move from floor to floor without help, and that can be carried from job to job in a passenger car without sending a truck to move it.

All these requirements are met by the

## Speedmatic "8"

The high speed balanced drum with a revolving surface speed of 2,300 feet per minute cuts so fast that the abrasive has no chance to clog or drag, thus saving abrasive costs. Patented spring drum suspension secures a fine finish. SIXTEEN ball bearings built into the Speedmatic mean a low up-keep cost and handling ease that will surprise you. For areas over 1,500 sq. feet ask about the larger Speedmatic "12".



## Sands Butt Ends with the grain!

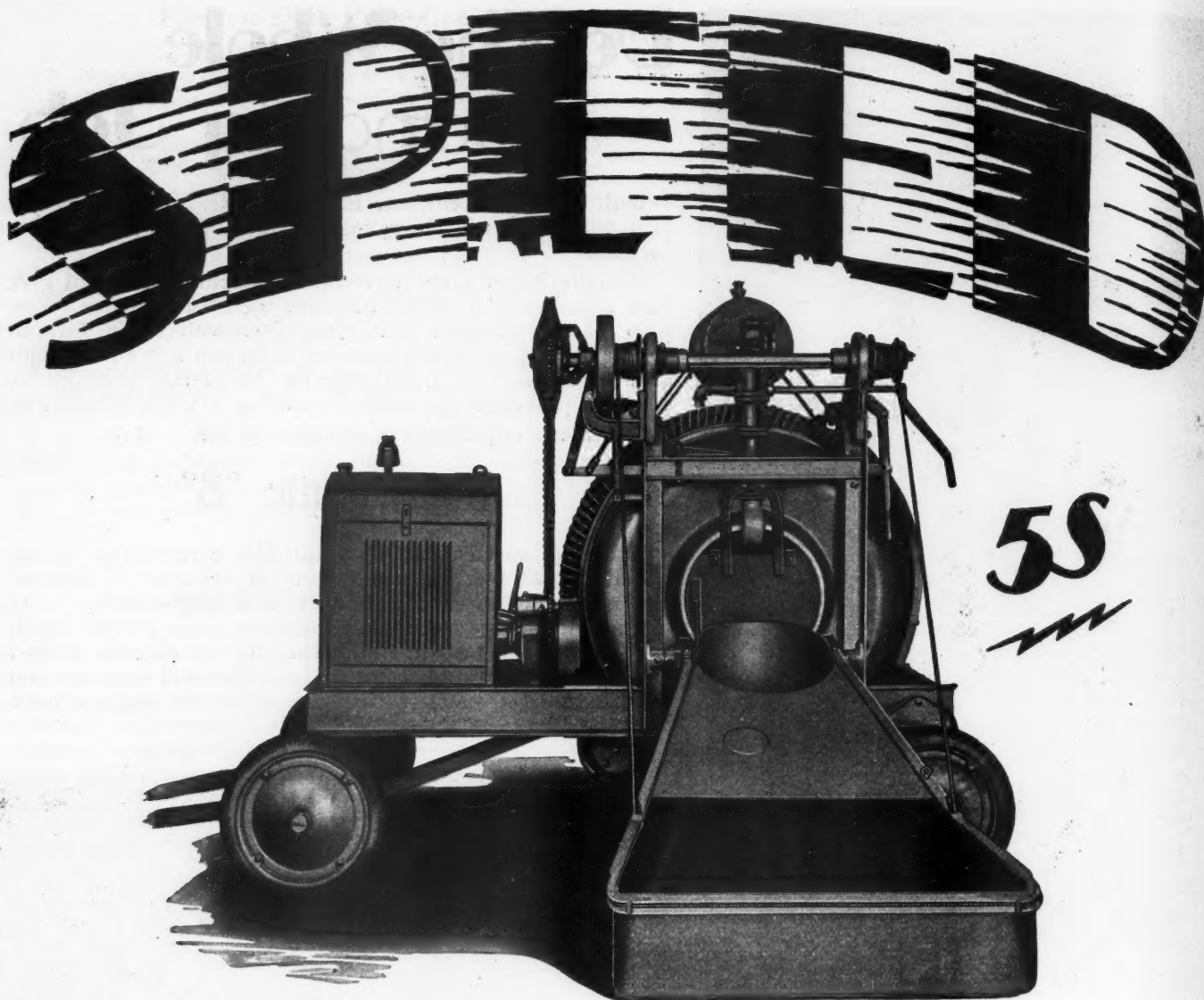
It is no longer necessary to hand scrape or hand sand the edges of flooring. These tedious, expensive operations are entirely eliminated, and you get a more uniform and satisfactory finish that matches the rest of the floor, by using the Edging Attachment with the

**SUPER**  
Take-About Edger

Even on butt ends of floors you can sand with the grain right up to the quarter round. The belt action gives a smooth ripple-less finish that matches perfectly the larger surfaces sanded with the Speedmatic. Also quickly sands closets, alcoves, stairs, etc. Light weight makes it a time saver on bench work. With a Speedmatic and the Super Take-About Edger, you do the whole sanding job, eliminating all hand work. Ask for further information or a demonstration of these machines. Built with machine tool accuracy by machine tool builders.

**Porter-Cable Machine Company**  
1721 N. Salina St. - - - - Syracuse, N. Y.





## In Getting Jobs Done...

Send for a copy  
of our 5-S cir-  
cular—It's yours  
for the asking.

**G**ETTING materials in and out of the drum faster—*speed in handling*—the Leach 5-S Mixer has this "knack". It gives you that extra daily yardage at the lowest cost per batch, which is *profit to you*.

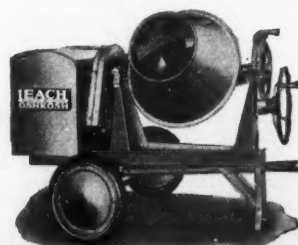
In its size and type, it is outstanding. Think of it—*all-steel construction, large drum openings, direct drive, no complicated jack shaft, clean charging skip, dependable power*.

Try the Leach 5-S—it's a winner—*has speed, capacity and longer life*. It's the "Hustler" of all Leach Orange-painted Mixers. If you want low price and big yardage try a Leach.

*Write for Details*

**LEACH COMPANY**  
Oshkosh, Wisconsin

Put this Leach Tilter Trailer to work. It is low priced—it has speed of operation and is more durable. It's a real buy.



# LEACH MIXERS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



## *Durundum Floor Sanding Paper Keeps Pace with Construction Schedules*

**M**ODERN construction moves fast, and the floor contractor has to get out of the way for the next man, just as all other contractors do. His abrasive paper determines his success in meeting his schedule. To finish up on time, he needs the fastest cutting paper; to have his work pass inspection, he must use a fine finishing paper; and to make his profit, he needs an economical, high production paper.

**B**EHR-Manning Durundum, as thousands of floor surfacers have found, has all these qualities. Its electric furnace grain is the fastest cutting abrasive obtainable. The careful grading and inspection given the grain assure a fine finishing sheet. A tough, rugged paper backing, combined with the long lasting, fast cutting grain, provides an economical paper with a long production life.

*"Good Workmen Know the Difference"*



BEHR-MANNING  
CORPORATION

T R O Y  
NEW YORK





### Builds Hollow Concrete Walls

USING the molds illustrated here, it is possible to build two 3½ inch, or two four inch, monolithic concrete walls with a 2¼ inch, dead air space between, uninterrupted by anything that is conductive to heat, cold or moisture. This system saves all lumber, nails, wire and labor used in putting up and taking down wood forms in which to run the concrete. Two operators on the machines, with three helpers, will be able to build 50 lineal feet of wall in one hour, it is stated. These figures are for one to six standard mix.



These Molds Are Light Enough to Be Handled Easily by One Man.

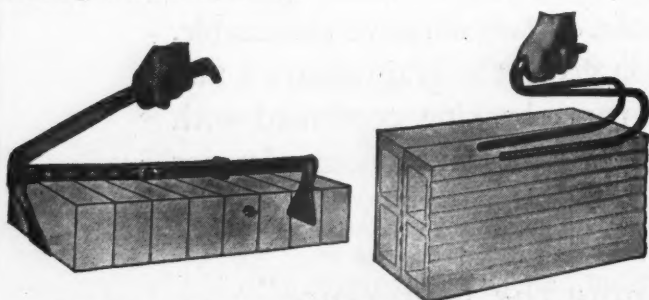
The walls are built in nine inch courses around the building, one course above the other, all knitted together and bonded into a double monolithic wall tied together with galvanized wall ties. The molds can be handled easily by one man, the two sizes used weighing 38 pounds and 55 pounds.

This hollow wall construction obviates frost coming through these walls. The continuous air space acts as the dividing line between the temperatures of the outside and inside and has a neutralizing effect, leaving the inner wall always warm and dry. A careful record has been kept, the manufacturers state, of the temperatures of the interiors and exteriors of hollow wall buildings in extremely cold weather. The results have been that where the temperature outside has dropped 30 degrees within 24 hours time, no decided change was recorded in the interior of the building. This is offered as proof of the practical insulating value of this type of wall construction.

Comparisons are also available of the cost of this construction and other commonly used types which make very favorable showing for this construction.

### Brick Clamp and Tile Hook

HERE are two pieces of equipment which the contractor will find most convenient. The brick clamp handles eight or more brick at a time without injuring brick or bruising workman's hands.



A Brick Clamp and Tile Hook Which the Builder Will Find Handy, Time and Labor Saving Tools.

This clamp is made of malleable iron and stands rough usage. It is easily adjusted by a thumb nut to desired size of brick or number in a load. Picks up and discharges instantly. Lever grip is sure.

Time and labor cost saved by the clamp quickly makes up the cost of equipment. The tile hook picks up one

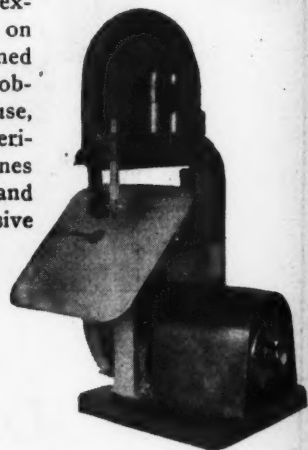
or two building tile, according to size, and makes possible handling tile in each hand. Saves workman's hands and speeds up operations. Made in two sizes, two and three-prongs.

### High Grade Portable Band Saw

A SMALL portable band saw is an important aid to the builder in producing a modern, up-to-date house. The machine illustrated here will operate from a line with a 20 ampere fuse. It can be carried up or down stairs by the average man, can be operated on a work bench, two horses or a soap box and will handle work up to 5½ inches thick.

While this is not the most expensive machine of its kind on the market it has been designed and built with quality as the object, regardless of cost because, this company states, its experience shows that such machines lacking the best of material and workmanship are too expensive to operate and are soon discarded for quality machines.

This machine has the following specifications: weight, 180 pounds; base, 18 inches square; height, 40 inches; steel table, 18 inches square, offset, tips full 45 degrees; wheels, 14 inch, steel disc, rubber tired, top wheel tilts and has vertical travel of three inches. The blades used are ⅝ inch for ⅝ inch radius, ¼ inch for general work and ½ inch for ripping. A ½ H.P. motor is recommended for work up to 5½ inches, a one H.P. motor for metal cutting and production work. Guards completely cover the motor, wheel gears and all of the blade, except from the guide to the table. The machine is shipped completely equipped and ready to use.



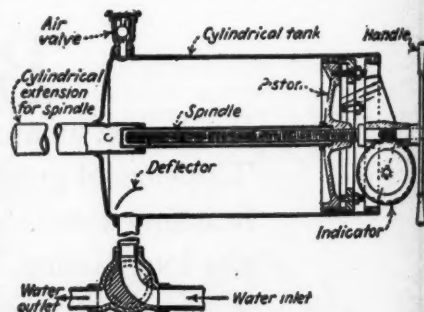
This Saw Is a Quality Job but Not Expensive in Cost.

### Tanks Measures Water for Mixers

A NEW water measuring tank, quite extensively used in Europe, according to the importing firm which is now introducing it in the United States, is shown in the

accompanying illustration. The device consists of a cylindrical tank which can be varied in volume by the adjustment of a piston or spindle. On the outer end of the piston there is a handle, geared to an indicator, showing the volume of the tank. Turning this handle changes the volume of the tank to the desired amount.

On the opposite side of the tank there is an air valve, at the top, and a water valve, at the bottom. The water valve is a three-way valve serving both as an inlet and an outlet. The deflector seen in the illustration turns the entering water so that complete filling of the tank is assured. It is claimed that this measuring device can be fixed to any standard concrete mixer.



This Tank with Adjustable Volume Measured Any Desired Amount of Water for the Concrete Mixer.

# Start NOW To Earn BIG MONEY



American High Production Floor Sander

## Experience Unnecessary

Many have started in this business with an "American" floor sander but with no knowledge of floor sanding, and have developed a successful business. Why? Because the American High Production Floor Sander produces quality work easily and smoothly, and because it does at least *double* the amount of work and therefore makes *double* the amount of money for you.

## Work Easy To Get

With the large number of floor sanding jobs available right NOW, you will be able to develop a large, big paying business within just a few months. Let us tell you more about this profitable business and about our "On Approval Plan."



Easily Carried by One Man

## The American Floor Surfacing Machine Co.

515 So. St. Clair St. Toledo, Ohio

Branch Service Stations in Principal Cities

CANADIAN REPRESENTATIVES

The A. R. Williams Machinery Company, Ltd.

Manufacturers of Floor Surfacing and Polishing  
Machines Exclusively for More Than  
a Quarter of a Century

## Mail The Coupon NOW!

The American Floor Surfacing Machine Co.  
515 So. St. Clair St., Toledo, Ohio

Gentlemen: Without obligation, please tell me more about how I can cash in on the Spring months with an American High Production Floor Sander. Also tell me about your "On Approval Plan."

Name.....

Address.....

City..... State.....



# MOTOR TRUCKS *and* TRAILERS

## Profits in Truck Bodies

**M**ANY contractors who maintain their own shops are on the lookout for supplementary shop work to fill in the slack periods and keep the shop organization together, ready for peak demands, and at the same time add an additional item of profit. The tremendously rapid growth of the use of motor trucks opens up for such contractors a field of work which fits in admirably with the work already handled. That is the building of special truck bodies.

Many types of truck bodies are already on the market and can be purchased as stock equipment. At the same time there are many owners who require special bodies which must be built to order and then, too, there is the need of providing new bodies for used trucks which are changing hands and must be differently equipped. A surprisingly large number of farmers, who are very extensive users of motor trucks, want to work out their own ideas in the matter of truck bodies and the logical place for them to have the work done is in the shop of their local contractor. When the contractor is organized to handle this business he can turn out a better job at lower cost and greater profit.

The enterprising contractor with a small shop can well afford to spend some time checking up on the demand for such work in his territory and, if he finds a

sufficient market, organizing his shop to handle it. In making such a check up, not only the farm truck market should be investigated, but also the market among merchants and others in the various towns in the territory.

When starting out in this line of work, it is seldom wise to lay plans on too pretentious a scale at first. Starting on a small scale, first make sure that the market is there and that you can turn out the work in a manner to meet the demands and sell it at a fair profit. When this is determined, you will be justified in increasing your equipment and building on the basis of what you actually know. After you have made some sales, have found that you can give satisfaction and that you can make money on every job, then will be the time to lay plans for enlargement.

The shop outfitted for making truck bodies should contain at least the following pieces of equipment: a cut-off saw, a rip saw, a trim saw, planer, tenoner, jointer, mortising machine and a complete paint spraying outfit, which must be confined within a tight room. This paint spraying outfit should include the machine itself, a compressor and tank of good capacity and suitable pipe lines. It will, quite probably, be found an advantage to pipe the compressed air to other parts of the shop where it can economically be applied to a variety of work.

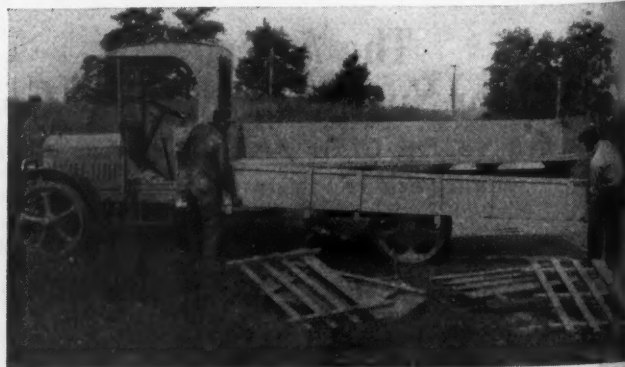
As will be noted, this is



A Very Good Type of Body, Solid Floor with Movable Sides, a High Type for Stock Handling.



The Same Truck as Above but with Low Sides of the Regular Type.



The Same Truck Equipped with Solid Sides for Hauling Loose Grain.

# The INTERNATIONAL HARVESTER SIX-SPEED SPECIAL *has a 2-SPEED AXLE*



## The Only SPEED TRUCK Built with *Two Complete Power Ranges*

This truck will Out-Pull, Out-Climb, and Out-Perform  
any truck of similar rating under full load

The International line also includes the Special Delivery for loads up to  $\frac{3}{4}$ -ton; 4 and 6-cylinder Speed Trucks of 1 $\frac{1}{4}$ , 1 $\frac{1}{2}$ , and 2-ton sizes; Heavy-Duty Trucks ranging from 2 $\frac{1}{2}$ -ton to 5-ton sizes; Motor Coaches and McCormick-Deering Industrial Tractors. Sold and serviced by 172 company-owned branches in the United States and Canada, and dealers everywhere.

**T**HIS new 1-ton truck—the International Six-Speed Special—has already rolled up a remarkable reputation, not only in this country, but also in Canada and foreign lands.

Sales have been breaking records and the performance of the truck is setting new records in every kind of hard hauling.

No other truck built is like The Six-Speed Special. It has a 2-speed axle, giving it six speeds forward and two reverse—making two complete power ranges. A light shift of the auxiliary lever throws from one range to the other instantly. And there you are—as the going de-

mands—fleet speed for the straight-away or ten times the pulling power for your capacity loads in the toughest going.

There are four-wheel brakes to balance the speed with safety; every chassis member is designed and built to stand the strain of the tremendous tractive power; and the engine itself demonstrates real all-around operating economy.

See this unusual truck—drive it—try it on your job—give it any test. You've never seen a truck built like The Six-Speed Special and you've never seen one equal its performance. And you'll like the low price as well as the truck.



INTERNATIONAL HARVESTER COMPANY  
606 So. Michigan Ave. OF AMERICA  
(Incorporated) Chicago, Illinois

# INTERNATIONAL TRUCKS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





**A Special Truck Body Built to Meet the Individual Ideas of a Farmer.**



**The Truck with a Detachable Body Is in Demand Among Farmers Because It is Adaptable.**

just about the same equipment as required in the wood-working shop of the general contractor who maintains his own shop. Such a contractor will have to make few changes in shop equipment and very little investment when first experimenting with this work. Later he can add equipment as the volume of business justifies it.

The equipment of the shop should be arranged, as nearly as possible, so that the work can move continuously from one end of the plant to the other. An arrangement in the form of a horse shoe will permit the raw materials to start at one end of the building, move along one side, across the other end and down the other side and, theoretically at least, they will reach their starting point as a finished product.

Of course the building, when finally organized for truck body building, will be divided into several rooms. First, there is the woodworking room where the rough lumber is sawed, formed and dressed. This will include saws, planers and most of the wood-working machines. The parts will then move along to an assembly room where they are put together. A blacksmith shop is a requisite for the shop handling a fairly large amount of work. This must have rather complete modern equipment and should adjoin the assembly room.

After the body has been assembled it passes to the paint shop, where it is finished, and then on to the upholstery room and finally to the crating and shipping room. There should also be an ample space for the storage of lumber and other materials, the size being determined by the amount of work handled and the advantage which may be obtained by buying of materials in quantities.

As a business of this kind grows larger, it will be found advantageous to have a foreman in charge of each department or room, who will be held responsible not only for production and the steady flow of work through his de-

partment, but also for the economy and quality of work done in the department.

The experienced contractor should have no difficulty in perfecting his shop organization and production as these problems, as well as the problems of purchasing material, are already familiar to him. The sales department will, perhaps, present the greatest problem, for, though the selling of truck bodies is not greatly different from the selling of building jobs, it is important that the volume of work should be as steady as possible in order to obtain real economy in production. Then, too, if this body building work is carried as a supplement to the general contracting work the sales effort should be so directed as to make it serve this purpose by developing the greatest volume of body work for periods when the building activity is at its lowest.

One of the best ways to obtain new prospects for truck body work is, of course, through customers already sold. A customer well satisfied with the work done for him will not hesitate to recommend your shop nor to give you the names of others who may be interested in similar work. Every name obtained should be listed in an open file and followed up regularly.

One very successful way of keeping your shop in the prospect's mind and creating good will is by the means of a monthly letter or printed periodical. This should go not only to the prospects of truck body work, but also to dealers. It will be found highly profitable to work with truck dealers. These dealers are in constant touch with owners who require body work and very few of them are equipped to handle such work themselves. They should be approached with a definite proposition which will make it profitable for them to turn work your way.

DALE VAN HORN



**A Cheap Body of a Type Which Will Appeal to Many Farmers.**



**A Speed Truck Equipped with a School Bus Body for the Use of the Peetz Consolidated School System, Peetz, Colo.**

# Why Not Save \$22 Out Of \$100

The American Mutual paid back to policyholders last year \$22 out of each \$100 that they paid for Workmen's Compensation or Automobile Insurance. For the past forty-two years, it has always paid back at least 20% of the cost of their insurance.

## Compensation

Policyholders have saved thousands of dollars . . . and this, the strongest, largest and oldest mutual liability insurance company in the world has given them quick, efficient service.

In fact, American Mutual service is of such high quality that 96% of its policyholders renew their policies year after year.

Write for a representative list of our policyholders and let them tell you about American Mutual service, stability and saving.

## Automobile

Dividends of never less than 20% mean a saving on automobile insurance — in addition, the American Mutual has helped policyholders prevent accidents.

The American Mutual has worked with truck fleets that have averaged one accident every 4,000 miles. Our engineers have instituted systems of safety that have improved these records to the extent that some fleets now average only one accident every 150,000 miles. Write for detailed information today.

AMERICAN MUTUAL LIABILITY INSURANCE COMPANY, 203 COLUMBUS AVENUE, BOSTON

*Branch Offices in Principal Cities*

# American Mutual



► Write today for full information about this, the strongest, largest and oldest mutual liability insurance company in the world.

To the American Mutual, 203 Columbus Ave., Boston

Please send me detailed information about American Mutual service and saving — particularly as applied to  
☐ Workmen's Compensation, ☐ Automobile Insurance.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

MAIL THIS COUPON TODAY



# for the FINEST RESIDENCE

**Bradley-Miller**  
Michigan White Pine  
Frames

Did you ever inspect a Bradley-Miller Michigan White Pine Frame? Then go to your dealers today and do it. Note the fine workmanship, correct design and excellent material. Remember that all exposed parts are of Michigan White Pine, a wood that withstands rotting, cracking, splitting and warping. That takes paint well and holds it long.

These Frames are built to last a lifetime. You will find them accurate to the last detail. You can secure Bradley-Millers without delay for any size opening, any style of architecture and any type of construction. Place your order for your next job now; a trial will convince you of their superior qualities.

Or—

## SMALLEST COTTAGE

Your Dealer Can Supply You

We have an interesting booklet describing Bradley-Miller Michigan White Pine Frames. A copy will be mailed you free of charge. Just send us your name and address.

**BRADLEY-MILLER & CO.**  
BAY CITY, MICHIGAN

### Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

The Finishing Lime Association of Ohio, Toledo, Ohio, has issued a pamphlet under the title "The Preparation and Application of Textured Finishes."

G. I. Sellers & Sons Co., Elwood, Ind., has published an attractive new catalog under the title "New Stylish Colorful Sellers Kitchen Cabinets and Kitchenaires," which illustrates in colors this company's products.

The Durabilt Steel Locker Co., Aurora, Ill., has issued new inserts for the Durabilt loose leaf catalog covering "The Improved Durabilt Steel Locker" and "General or Open Locker Specifications."

The General Electric Company, Schenectady, N. Y., has issued two new loose leaf catalog sheets on the subjects "Atomic-Hydrogen Arc-Welding Equipment" and "Type CP, Motor-driven, Center-gear, Reciprocating Air Compressors for Railway and Industrial Service."

The Buffalo Forge Company, Buffalo, N. Y., has issued a catalog pamphlet covering a new line of unit heaters known as the Lowboy and the Highboy.

The Morgan Woodworking Organization, 2287 Blue Island Ave., Chicago, has put out a new folder on home modernizing which is designed for the use of Morgan dealers throughout the country.

The American Concrete Institute, 2970 West Grand Blvd., Detroit, Mich., has published the following booklets which are portions of the proceedings of its 1929 convention: "Proposed Purchase Specification for Concrete Aggregates," a committee report; "Proposed Specifications for Cast Stone," a committee report; "Proposed Specifications, Finish Coat Portland Cement Stucco," a committee report; "Confusion of Specifications for Aggregates," by L. E. Williams; "Water Tables and Curves for Use in Designing and Estimating Concrete Mixtures," by Herbert J. Gilkey. Price 25 cents each.

The American Floor Sanding Machine Co., 518 South St. Clair St., Toledo, Ohio, offers several interesting pamphlets describing its floor sanders, floor maintenance machines and floor polishers.

The Consolidated Expanded Metal Companies, Wheeling, W. Va., has published a catalog as a reference for specifying its Steelcrete frame bar window, door, transom and skylight guards for public buildings, factories and homes.

"General Electric Elevator Control" is the title of a new booklet, published by the General Electric Co., 1 River Road, Schenectady, N. Y., describing the electric elevator equipment manufactured by that company.

The Bureau of Business Research, Harvard University, Boston, Mass., has published its bulletin No. 75, "Operating Expenses of Building Material Dealers in 1927" which is the second study of this subject made by the Bureau, the expenses of which were met by The Atlas Portland Cement Co., 25 Broadway, New York City. Price \$1.50.

"A Trip Thru the Home of the Vanishing Door" is the title of a book published by Mr. V. L. Evans, Washington, Indiana, which illustrates the office and plant where the vanishing door, ring joint and hollow sanitary doors are manufactured.

"Techniques" is the title of a very handsome book published by the Chas. M. Higgins & Co., 271 Ninth St., Brooklyn, New York, and which contains illustrations in Higgins' American India Ink, typical examples of pen and ink techniques. Price, 50c.

CERTIFIED EARNING ABILITY



Hard-thinking business men, who realize that  
**HAULAGE SAVINGS** are **NET PROFITS**, are the  
 men responsible for Federal's remarkable record  
**... 72% REPEAT SALES.**

THE FEDERAL MOTOR TRUCK CO., 5842 FEDERAL AVE., DETROIT, MICH.  
*"Leading Specialists in Commercial Transportation"*

(221)

**FEDERAL TRUCKS**

Write for "The Federal System of Truck Operation Control"

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## Books, Bulletins and Catalogs for You

**T**HE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

"A Revelation in Woven Metal," is the title of a booklet prepared by the Metalace Corporation, South Boston, Mass., and listed as Catalog F covering this company's line of metal grilles and webbings.

The Chemical Toilet Corp., 621 Glen Ave., Syracuse, N. Y., offers several pieces of literature on its equipment to provide modern toilets without water.

The National Lumber Manufacturers Association, Washington, D. C., offers a book "Lumber and Its Utilization—The Lamella Roof" contains complete data and illustrations of Lamella roof construction.

Pass & Seymour, Inc., Solvay Station, Syracuse, N. Y., offer two booklets on their Alabax porcelain lighting fixtures, which can be obtained in colors.

The Armstrong Mfg. Co., Bridgeport, Conn., has published a circular on their Armstrong adjustable dies.

Finishing Research Laboratories, Inc., Chicago, Ill., has published a pamphlet containing a paper, by Mr. Wm. J. Miskella, prepared for and presented at the regular monthly meeting of the Illinois Society of Architects on "Learning New Facts About Paints, Varnishes, Enamels and Lacquers by Research Developments in Testing."

The Long-Bell Lumber Company, Kansas City, Missouri, has published a very charming booklet, "The Book of Lawn Furniture" which is very completely illustrated.

The "Upson Blue Book" offered by the Upson Company, Lockport, New York, contains detail plans showing the proper way to obtain attractive walls and ceilings with Upson board.

The Vitrolite Company, 120 S. LaSalle St., Chicago, Ill., offers two attractive booklets "Vitrolite Kitchens" and "Vitrolite for the Home" which are illustrated in black and white and colors.

The Bureau of Business Research, Harvard University, Soldiers Field, Boston, Mass., has just published the results of a study of "Operating Expenses of Building Material Dealers" in 1927 in their Bulletin No. 75. Price, \$1.50.

The Insulite Co., 1202 Builders Exchange, Dept. 6, Minneapolis, Minn., has issued a pamphlet on "How to Build a Playhouse for the Kiddies" using their wood-fiber insulating board.

The Concrete Steel Co., 42 Broadway, New York, N. Y., has published a book on "Modern Concrete Reinforcement" which is a practical manual for architects and builders on concrete reinforcement and includes notes on specifications and inspection methods.

"Store Fronts," by Zouri, is a very handsome catalog published by the Zouri Drawn Metals Co., Chicago Heights, Ill., which entirely covers the construction of store fronts and encloses full size details of Zouri and International Store Front Construction.

The Norman W. Henley Publishing Co., 2 W. 4th St., New York, N. Y., has recently published a book, "The ABC of Aviation" by Victor W. Page, Major U. S. Air Corps Reserve and which contains 150 illustrations. Price, \$1.00.

"A Roof Simplifier and Rafter Chart" issued by T. W. Martin, 714 E. Fourth St., Charlotte, N. C., is an accurate and time saving method of cutting roof rafters. Price, \$1.00.

"The Charm of the Sovereign Wood" is the title of a book published by the Hardwood Manufacturers' Institute, Memphis, Tenn., and which very handsomely illustrates the use of oak.

You'll  be interested in this

A New  
and  
Improved  
**ROLLING  
SCREEN**  
!

Backed by thirty-five years of specialized experience in the screen industry, the Higgin Organization has now developed a Rolling Screen that operates satisfactorily under all conditions.

Up or down it glides—swiftly—quietly. As convenient as your window shades! Winter storing eliminated. No painting. No trouble. Ultra-modern home equipment—for the first time made thoroughly practical and amazingly serviceable!

What a selling point for the homes you build! Your clients *naturally* prefer rolling screens. And now you can give them the best on the market—at little or no extra cost to yourself!

Mail the coupon now for our illustrated booklet and complete information.

**HIGGIN**  
ALL METAL  
**SCREENS**

The Higgin Mfg. Co.  
502 Washington Ave.  
Newport, Ky.

Please send complete information  
regarding your new rolling screen.

Name \_\_\_\_\_

Street \_\_\_\_\_

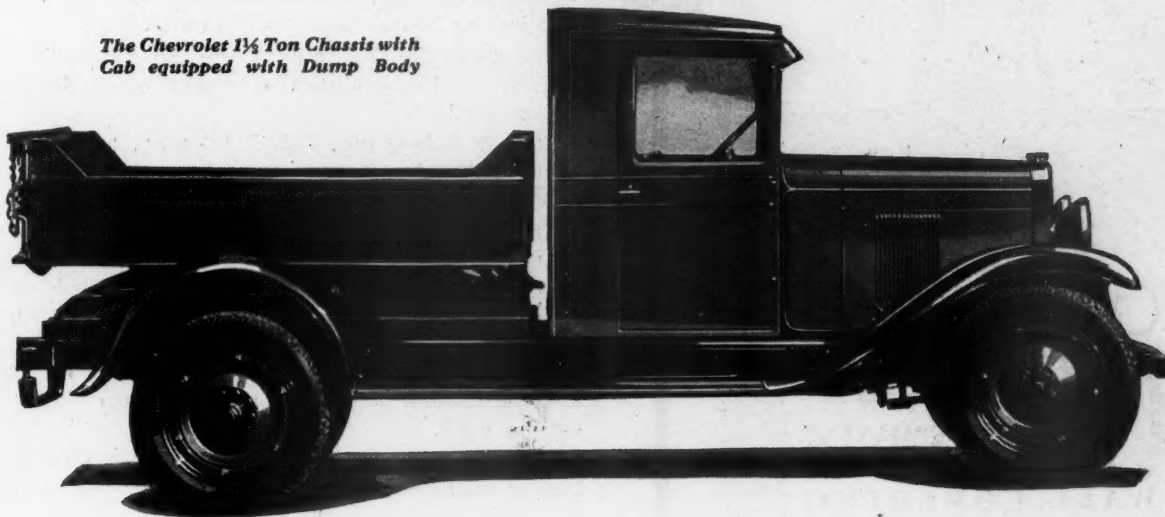
City \_\_\_\_\_

State \_\_\_\_\_

for Economical Transportation



The Chevrolet 1½ Ton Chassis with Cab equipped with Dump Body



## A Six-Cylinder Truck with the Economy of the Four... Ideal for Builders

Offering all the brilliant performance advantages of a great new six-cylinder valve-in-head engine—yet amazingly economical, both to own and to operate—the new Chevrolet trucks are meeting with unrivaled popularity among users in every line of business.

Never before has Chevrolet's leadership in quality and value been so decidedly pronounced. Six-cylinder performance—with its greater reserve power, higher speed, faster acceleration and smoother operation! Marvelous handling ease—the result of a full ball bearing steering mechanism, powerful

4-wheel brakes, and a positive, smooth-acting dry disc-clutch! Rugged dependability—assured by a heavy channel steel frame, massive banjo-type rear axle housing and scores of additional features of advanced design! And all available in the price range of the four.

See your Chevrolet dealer today. He can provide you with a Chevrolet six-cylinder truck designed especially for your business that will combine dependable six-cylinder transportation with the outstanding economy of the four!

1½ Ton Chassis..	\$545
1½ Ton Chassis with Cab .....	\$650
Sedan Delivery ..	\$595
Light Delivery Chassis .....	\$400
All prices f. o. b. factory Flint, Michigan	

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN  
Division of General Motors Corporation

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A SIX IN THE PRICE RANGE OF THE FOUR

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# For Free Sample

THIS IS  
PATTERN  
No. 626

HANGS LIKE  
WALL  
PAPER



**Oil-Texd**  
NEW  
PERMANENT  
TEXTURED  
WALL COVERING

*A Better Rough Wall Decoration  
in Modern Craft Texture Designs*

Washable — Decorative — Easily  
Applied — Inexpensive — Built up  
in Linseed Oil — No Surface  
Cracks — Easily Repaired — Can  
be removed, permitting any other  
type of decoration.

The wall is finished in one opera-  
tion without smudging the wood-  
work and a uniform texture is  
assured. Applied to any smooth  
surface like wall paper.

Made in any color and in a vari-  
ety of designs suitable for any  
room in the home, public hall,  
stores, etc.

**Lincrusta-Walton Co.**  
Hackensack, New Jersey

Width of Roll 19½ inches Trimmed  
LENGTH OF ROLL—8 YARDS

LINCROSTA-WALTON CO.  
Hackensack, New Jersey

Please send me free samples and literature.

NAME.....  
ADDRESS.....  
TOWN.....  
STATE.....

## Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

The Asbestos Shingle, Slate & Sheathing Co., Ambler, Pennsylvania has published a pamphlet, which illustrates in colors its Ambler asbestos "Waltile".

The Alexander Oil Burner Corp., 201 Fulton St., Brooklyn, N. Y., has published a booklet which describes its line of oil burners.

Steel & Tubes, Inc., 232 E. 131st St., Cleveland, Ohio, offers a booklet on its new electrical metallic tubing, "Steeltubes" which is a threadless thin wall conduit.

The General Maintenance Co., 5419-29 Cicotte Ave., Detroit, Mich., has issued a pamphlet which describes their use of the "Nielco Lightning Washer" as made and sold by Nielco (Div. Consolidated C. M. Corp.), Adrian, Mich.

The Home Brass Radiator Corp., 1 E. 42nd St., New York, N. Y., offers a pamphlet which tells of its "Robras" invisible radiator designed for steam, vapor or hot water heating work.

"Foundation Walls and Basements of Concrete" is a new booklet published by the Portland Cement Association, 33 W. Grand Avenue, Chicago, Ill.

The American Stamping Works, 219 So. Peoria St., Chicago, Illinois, has published a circular which describes its "Art Kraft" steel ceilings.

"Houses of Stucco" is a very complete 44-page illustrated book published by the Atlas Portland Cement Company, 25 Broadway, New York City.

The Consolidated Expanded Metals Companies, Steelcrete Bldg., Wheeling, W. Va., offers a circular which tells of the use of Steelcrete mesh reinforcement, as the material used for the construction of the Holland Vehicular Tunnel under the Hudson River.

The Speed-Way Mfg. Co., Inc., 40 Eighth Avenue West, Cedar Rapids, Iowa, publishes a circular illustrating and describing its combination portable electric saws.

The Philadelphia Building Congress, Otis Bldg., 112 So. 16th St., Philadelphia, Pennsylvania, has published "Architectural Woodwork", which is Document No. 1 covering the completed millwork report of the first of the Philadelphia Building Congress' Industry Group Conferences.

"Standard Specifications Covering Installation of Rubber Floor Tiling," is the title of a pamphlet published by the Rubber Flooring Manufacturing Division, the Rubber Association of America, Inc., 250 W. 57th St., New York.

The Copper & Brass Research Association, 25 Broadway, New York, N. Y., has published a circular illustrating materials and articles that should be made from Copper, Brass and Bronze.

The Vento Steel Sash Co., Muskegon, Michigan, offers a circular illustrating and describing its Vento puttyless steel basement windows.

The Keasbey & Mattison Co., Ambler, Pennsylvania, publishes a book entitled "Ambler Sound Absorbing Plaster" in which its acoustical plaster is illustrated in different colors.

The Atlas Portland Cement Co., 25 Broadway, New York, N. Y., has published a book on the use of "Atlas White Portland Cement—Pure white and with all the strength of gray Portland Cement—for Remodeling Stucco."

The Stow Mfg. Co., Inc., Binghamton, New York, offers two Bulletins, Nos. 350 and 6000 on the Stow flexible shaft machines.

# mileage



**ALL-CORD**...that's the process that makes Fisk *mileage* a fact.

*All-Cord* construction does away with cross threads in the tire fabric...prevents internal friction and overheating.

In addition to the *All-Cord* process Fisk uses the Multiple Cable Bead, giving extra strength at the rim, where the strain is greatest.

This firm foundation of steel cables, and the frictionless *All-Cord* action, make Fisk Tires equal to every driving strain. Depend on them for any truck tire job...they pile up *mileage* even where working conditions are worst.



Time to Re-tire  
Get a FISK  
TRADE MARK REG. U. S. PAT. OFF.

THE FISK TIRE COMPANY, INC.  
CHICOPEE FALLS, MASS.

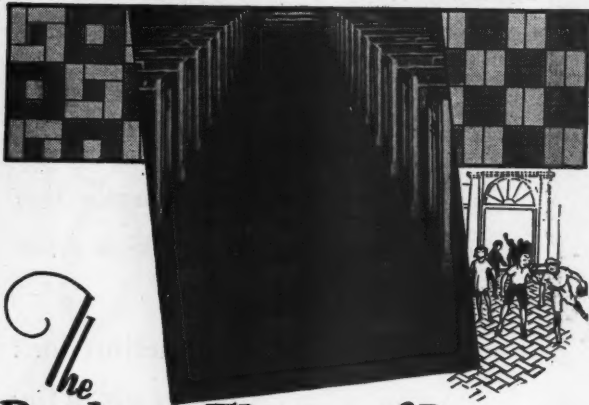
# FISK

## TRANSPORTATION CORD





## TILE-TEX



### The Resilient Floor of Beauty that Defies wear and Lasts a Lifetime

For floors below grade—especially where dampness must be contended with; and for schools, hospitals, offices, churches, stores and similar large areas at above or below grade—TILE-TEX Resilient Tile affords the most economical and resilient floor that money can buy.

Neither water nor dampness affect TILE-TEX in any way. Being composed chiefly of asphalt and asbestos, it has all the waterproof and time-proof qualities of these famous materials. And it is the only resilient floor tile guaranteed to stay down and give perfect satisfaction when applied directly on concrete basement or grade floors.

TILE-TEX is resilient for comfort and quietness. Yet it is tough and durable for resistance to wear. No TILE-TEX tile has ever been known to wear out. It is laid complete in one operation and used immediately without waiting for drying or setting. And it costs less than any other resilient tile floor.

If you seek lifetime floors of beauty, permanence and economy, investigate TILE-TEX. Mail the coupon today for our big interesting floor book and name of nearest distributor.

### The TILE-TEX COMPANY Chicago Heights, Illinois

The TILE-TEX Company  
Chicago Heights, Ill.

Send your book—"Floors That Endure"—and give name of nearest TILE-TEX distributor.

Name.....

Address.....

City..... State.....



## The Water-Cement Ratio

(Continued from page 85)

### Depositing Concrete

Concrete shall be handled from the mixer to place as rapidly as practicable and in a manner that will prevent segregation of the ingredients. It shall be deposited in the forms as nearly as practicable in its final position to avoid rehandling. Concrete as it is deposited shall be puddled with suitable tools until forms are completely filled and reinforcement and embedded fixtures thoroughly incorporated in the mass.

Concrete shall be deposited continuously and as rapidly as practicable until the unit of operation, approved by the engineer, is completed.

Concrete when deposited shall have a temperature of not less than 40 degrees Fahrenheit and not more than 120 degrees Fahrenheit. In freezing weather suitable means shall be provided for maintaining the concrete at a temperature of at least 50 degrees Fahrenheit for 72 hours or more after placing, or until the concrete has thoroughly hardened. The methods of heating the materials and protecting the concrete shall be approved by the engineer. Salt, chemicals, or other foreign materials shall not be mixed with the concrete for the purpose of preventing freezing.

### Protection of Concrete

Exposed surfaces of concrete shall be protected from drying for a period of at least seven days after being deposited.



### Glossary of Building Terms

(Continued from page 97)

**Stile**—The upright piece in framing or paneling.

**String Board**—A board placed next to the well-hole in wooden stairs, terminating the ends of the steps. The string piece is the piece of board put under the treads and risers for a support and forming the support of the stair.

**Tail Trimmer**—A trimmer next to the wall, into which the ends of joists are fastened to avoid flues.

**Trimmers**—Double or triple joists or timbers for framing an opening in the floor. Support for headers.

**Valley**—The inside meeting point of roofs sloping at right angles with each other.

**Wainscot**—To line with boards or panels.

**Water Table**—A slight projection of the lower masonry or brickwork on the outside of a wall a few feet above the ground as a protection against rain. L. PERTH.



### L. E. Sigur Passes Away

THE Southern Pine Association regrets to announce the sudden death of Mr. Louis Earl Sigur, assistant advertising manager, on January 31, 1929.



### Name Exclusive Distributor

GALL & FEIG, 76-86 10th St., Long Island City, N. Y., has selected the Fiwale Equipment Mfg. Co., Inc., of New York City as exclusive distributor of their screen enamels, undercoats, varnishes, etc., to the screen trade.



### Druckenmiller Joins Penn-Dixie

B. W. DRUCKENMILLER is now connected with the Penn-Dixie Cement Corporation of New York City, and is assigned to special sales work for that corporation in marketing its products in different territories.

# DODGE BROTHERS TRUCKS



CHRYSLER MOTORS PRODUCT



## Building each week more than a million dollars' worth of business builders

REPEAT orders . . . . . new  
orders . . . . . fleet orders  
. . . . . orders for single  
trucks . . . . . hundreds of  
them in a single day . . . . .

More than a million dollars' worth of Dodge Trucks are built and sold every week.

No testimonial could be more convincing than are the purchases of these keen buyers who are backing their sound

truck judgment with their operating dollars.

They are buying what you want—power, speed, dependability, low operating costs, long life, high earnings. They buy business builders.

Let your Dodge Brothers Dealer show you the Dodge Truck that fits your needs exactly—body and chassis complete, ready to work.

### Formerly Graham Brothers Trucks

The complete line of Trucks, Buses and Motor Coaches which Dodge Brothers have been manufacturing and selling under the name of Graham Brothers now take the name of their makers—Dodge Brothers.

These Trucks, Buses and Motor Coaches have always been powered by Dodge Brothers engines. For years they have been built of Dodge Brothers parts in Dodge Brothers plants according to Dodge Brothers standards.

These Trucks, Buses and Motor Coaches are sold, as they always have been sold, by Dodge Brothers Dealers everywhere.

### PRICES

MERCHANTS EXPRESS—100' w. b. . . . .	\$ 545
COMMERCIAL TRUCK—120' w. b. . . . .	775
1-TON—130' wheelbase . . . . .	995
1-TON—140' wheelbase . . . . .	1065
1½-TON—150' wheelbase . . . . .	1345
1½-TON—165' wheelbase . . . . .	1415
2-TON—150' wheelbase . . . . .	1515
2-TON—165' wheelbase . . . . .	1585
3-TON—135' wheelbase . . . . .	1745
3-TON—165' wheelbase . . . . .	1775
3-TON—185' wheelbase . . . . .	1845

Chassis f. o. b. Detroit

SOLD BY DODGE BROTHERS DEALERS EVERYWHERE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





## Now Big Profits to Contractors from New Styles in Store Fronts

**I** NSTALLING store fronts today is a bigger and more profitable business than ever before. Modern stores demand new and different styles of fronts, to keep up with the latest in architecture. Merchants must have better display, larger plate, more striking effects.

Brasco leads in creating and manufacturing new designs in store front construction. We offer the most advanced ideas, worked out in the new white and black PermaWite Sash and in copper and art bronze—marvelous effects that catch the eye and pocketbook of every store owner.

And remember—Brasco has every advantage known today—simplicity—strength—glass safety—permanent beauty—ventilation—drainage—uses standard millwork—saves you money in erection.

Mail the coupon below for full details of how Brasco design service gives you all the co-operation you need to help you get the business and make money. No obligation whatever—mail it now!

**Brasco Manufacturing Co.**  
5029 Wabash Ave. Chicago  
28-14 Wilbur Avenue - - Long Island City

Mail  
the  
**COUPON**

**Brasco**  
STORE FRONTS

BRASCO MFG. CO., 5029 Wabash Ave., Chicago

Send me your free information on profitable store front work.

Name.....(AB 4-29)

Address.....

### N. L. M. A. Adopts Certified Grade and Trade-Marking

**T**HE "National Tree" trade-mark has been adopted by the National Lumber Manufacturers' Association, Inc. This trade-marking and grade-marking of lumber, with this symbol as a guarantee, is rapidly being adopted by the leading lumber manufacturers of the country. This gives assurance, to the lumber using industries, that there will always be available, in the future, ample supplies of lumber manufactured and graded in accordance with the American Lumber Standards, approved by the U. S. Department of Commerce and the Forest Service, of a quality attested by the grade mark, of a size as represented, and that, in case of error, refund of the purchase money or other satisfactory adjustment is guaranteed by the National Lumber Manufacturers' Association.



The "National Tree"  
Trade Mark of the  
N. L. M. A.

### Now Called Andersen Frame Co.

**A** N announcement from the Andersen Lumber Company, Bayport, Minn., states that this company has just completed the necessary legal procedure to change its name to the Andersen Frame Company. The company was incorporated under the old name 25 years ago. It was then just starting in the frame business and was operating retail yards at that time. For some time, the Andersen Lumber Company and its advertising agency have felt the need of a change of name as their name was not suitable to the product that they manufactured—Andersen Frames. With the changing of the name there has been no change in the management, stockholdings or policy of the company.

### Ambler Watile Colors

**T**HE Asbestos Shingle, Slate & Sheathing Company, Ambler, Pa., manufacturers of Ambler Asbestos Watile, which is a glazed, fireproof, wallboard, calls attention to the present list of colors in which this material is made. These are: white, black, smoke, green, pink, apple green and Nankin blue. A descriptive article in the January issue which mentioned marblized, walnut and mahogany as other colors available was incorrect to that extent, as these colors are not furnished by the manufacturer.

### Introduce Floridene Stone

**F**ORIDENE stone, a natural travertine of unusual individuality, quarried on the west coast of Florida, will be given its first public showing as a feature of the exhibit of the Johns-Manville Corporation, 292 Madison Ave., New York City, at that Architects' and Allied Arts' Exhibition, to be held at the Grand Central Palace, New York, April 15 to 23, 1929. The Johns-Manville Corporation has recently secured the exclusive distribution rights of this stone. One of the walls and a section of the floor of the Johns-Manville booth will be constructed of this material.

### New Sales Promotion Manager

**T**HE A. C. Horn Company, Long Island City, N. Y., manufacturer of paint, varnishes and waterproofings, has appointed Mr. Morton H. Schwartz as sales promotion manager. Mr. Schwartz was formerly advertising manager of the Fairfame Company and he succeeds Mr. W. H. Wahl, who has resigned.



*M. McGinnis Co., Jamaica Plains, Mass., has used Goodyear Tires for five years*

## "I Receive More Mileage from Goodyears"

In choosing tires for hauling service on your trucks, you have two sources of information to guide you.

One is the data about the tires themselves—the other is the experience of those who have rigorously tested these tires by actual use.

And both point to Goodyear.

You will hear this statement, by P. J. McGinnis, repeated with slight variations, by fleet operators everywhere:

"I find that I receive more mileage from Goodyear Tires, at a lower cost per mile, than from any other make of tire."

Goodyears have the cushion which carries the tons with less jar to truck and

driver. They have the brute vitality to stand up under the demands of contracting and excavating service. They have the exclusive All-Weather Tread, famous alike for powerful sure-gripping traction under every hauling condition and for remarkably slow, evenly distributed wear.

The Goodyear Super Heavy-Duty Cushion, the Goodyear Super Cushion (hollow center) and the Goodyear Dump Truck Pneumatic each meets a special need of contractors, builders and excavators—with time-saving, money-saving accuracy. Call on any Goodyear Truck Tire Service Station for recommendations covering the right tire for your hauling.

*More Tons Are Hauled on Goodyears Than on Any Other Tires*



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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## "I Fell In Love With That House On Sight!"



*This charming house at Portland, Oregon, shows color effects possible only through the use of Cabot's Creosote Shingle Stains on exterior woodwork and Cabot's Clear Brick Waterproofing on brick front. Cash & Wolf, Architects, Harry Phillips, Contractor.*

**C**OLOR has just as much to do with the charm of a house as design. The new and exclusive Cabot Collopack Process enables the colors to penetrate the wood, with the oil, instead of lying flat on the surface like ordinary paint.

The result is a soft, glowing, permanent color scheme. It is the joy of every good builder to recommend Cabot's Creosote Shingle Stains—he can secure luminous, lasting color effects that cause people to fall in love with his houses on sight.

Send for new booklet today. You will have an interesting hour reading it, and there is no obligation.

# Cabot's

## Creosote Shingle Stains

COUPON

*Samuel Cabot* Inc.

141 Milk Street  
Boston

Please send me full information on

CABOT'S CREOSOTE SHINGLE STAINS

Name .....

Address .....

AB-4-29

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

## Will Merchandise Packaged Shingles

**T**HE C. A. Mauk Lumber Company of Toledo, Ohio, has introduced an innovation in the merchandising of stained shingles. Mauk "double dipped" shingles, stained under pressure, are now packaged. Each bundle of shingles is wrapped in two sheets of heavy craft paper. It is then sealed, dust-proof and practically rain-proof.

The trademark is prominently shown so that the package does a double duty in acting as a distinctive identifying mark, as well as a protection for the shingles themselves.

✦

## Berger Makes Announcement

**T**HE Berger Mfg. Co., Canton, Ohio, subsidiary of the Central Alloy Steel Corp., has acquired the metal furniture division of the Van Dorn Iron Works Co., Cleveland, Ohio. According to an announcement issued by Mr. S. S. French, president of the Berger company, the manufacturing and sales of the Van Dorn lines will be continued at Cleveland for the present time. This purchase involved approximately \$1,000,000 and it includes all of the Van Dorn metal furniture machinery, tools and inventory in process. In addition, the Berger company has assumed all Van Dorn agency contracts.

✦

## T. L. Smith Buys Kwik-Mix

**T**HE T. L. Smith Company of Milwaukee, Wis., has announced the purchase of the Kwik-Mix Concrete Mixer Company, Port Washington, Wis. With the exception of the business office, which will be combined with the Milwaukee office of the T. L. Smith Company, the entire plant of the Kwik-Mix Concrete Mixer Company will continue to operate as before.

✦

## Milcor Plant Expands

**A**N announcement has been made by Mr. L. Kuehn, president and treasurer of the Milwaukee Corrugating Company of Milwaukee, Wis., of the extensive additions which are now being made to their Eastern plant, the Eller Manufacturing Company, Canton, Ohio. The additional investment for buildings and machinery will amount to \$200,000.

✦

## De Vilbiss Names New Officers

**F**OLLOWING the death of Mr. Thomas A. De Vilbiss, the founder and president of the De Vilbiss Company, of Toledo, Ohio, the reorganization of this company finds Mr. Allen D. Gutchess, nephew of Mr. De Vilbiss, in charge of the industry.

The other new officers are: William M. Booker, chairman of the board; Frank A. Bailey, vice-president and general manager; William F. Gradolph, general sales manager; Frank C. Penoyar, secretary; Walter W. Conklin, treasurer, and Howard De Vilbiss, son of the founder, assistant secretary.

✦

## Names of Subsidiaries Changed

**A**CCORDING to a statement issued by Mr. H. Stuckmann, president of the International Cement Corporation, the names of the domestic subsidiaries of the corporation are officially changed to the Lone Star Cement Company of the state in which each company is located. This change directly identifies each company with its product, Lone Star Cement, and makes the subsidiary company names uniform throughout the United States. The change only affects the name of the company, there is no change in the management, policies or products.

# BLACKBOARDS

## for All Requirements

Our products include Permaroc, Duroplate, Enduraroc, natural slate tack board and cork board. We positively guarantee the highest quality in all our materials.

We will gladly furnish drafting room details and specifications for your blackboard and bulletin board problems. Architect's details and a list of recommended areas and heights of blackboards covering all school, laboratory and lecture room requirements will be sent upon request.

Our quotations on blackboards and bulletin boards will save considerable money for you.

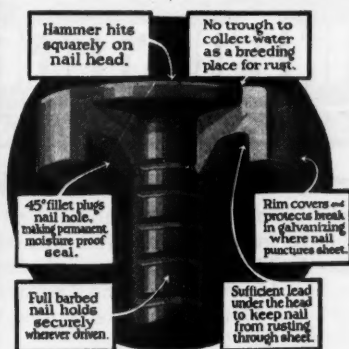
*Samples sent free on request*

**E. W. A. ROWLES CO.**  
2345 So. LA SALLE ST.,  
CHICAGO, - - ILLINOIS



**ROWLES  
TACK BOARD**

**ROWLES  
CORK BOARD**



## DENISTON

# "led-hed" NAILS

*"all the lead Under the head"*

"led-hed" Nails make a water-tight seal, the lead under the head plugs up the nail hole. The lead rim on the under side of the head conforms to the shape of the corrugated sheet and covers the break in the galvanizing, making a water-tight and moisture-proof seal. Always use "led-hed" nails in putting on corrugated sheet steel or iron roofing. They never fail to make weather-proof job.

### Note these Superior Points

1. MORE and BETTER nails for less money.
2. The "led-hed" CANNOT come off—not one is thrown away.
3. In driving the hammer hits the actual nailhead—not the lead.
4. A water-tight and moisture-proof seal is assured.
5. They drive through sheet steel without first punching the hole.
6. Impossible for sheet to ever rust around the nail hole.
7. Made with good barbed nails that will hold securely.
8. Quickly driven; labor cost reduced; cheaper to use.

Write today for free samples and circulars and please give us your dealers name. Building Supply Dealers—write for Dealer proposition.

**The DENISTON COMPANY**  
Not Incorporated  
4856 So. Western Ave., CHICAGO, ILL.

**"THE NAIL THAT NEVER LOSES ITS HEAD"**



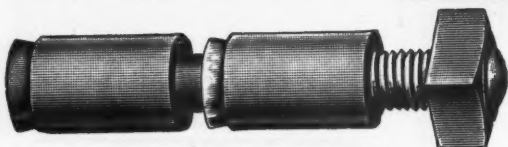
# Ackerman-Johnson



Expansive Screw Anchor



Stud Expansion Bolt (Single)



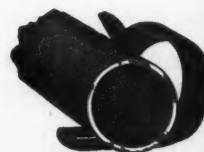
Stud Expansion Bolt (Double)

## Ackerman-Johnson

Expansive Screw Anchors hold greater load, particularly an agitated load, than any other expansive fastening made. To drill the concrete and complete a fastening requires but a fraction of the time taken for any other method and the saving is often more than the cost of the anchors.

## Ackerman-Johnson

Expansive Screw Anchors excel equally for fastenings to all the vitreous substances from plate glass to concrete and rock and that excellence has been substantially recognized by the larger contractors and construction engineers of the United States and parts of the world abroad.



Single Screw Clamping Pipe Strap



Concrete Insert

## Ackerman-Johnson Co.

625 W. Jackson Blvd., Chicago  
53 Park Place, New York City

## BUILD WITH ABSOLUTE ACCURACY-WIN PRESTIGE!

NOW A NEW LEVEL - 3 NEW IMPROVEMENTS - NO CHANGE IN PRICE !!



Just \$5.00 brings it to you complete—on 10 day trial. If perfectly satisfied pay the balance in easy monthly installments. Use it while you pay. It earns money faster than the easy monthly payments come due.

### Efficiency — Utility — Distinction

It's time to discard the old chalk line, plumb bob and rule method. This instrument guarantees absolute accuracy—puts you in the bigger builder class—brings you prestige! The new "3-F" Super-Speed Level—Level and Transit combined—is the World's best. More quickly convertible, very accurate, yet so simple that anyone can use it.

### Practical for a Hundred Uses

For leveling foundations, walls, piers, buildings, floors—running straight lines for fences, streets and ditches—laying out irrigation projects—surveying lots and fields—it fits any and every job requiring an accurate Level and Transit combined. Guards against expensive errors and saves time and money for you.

### You Learn to Use It in an Hour!

No technical knowledge needed—no experience necessary. With our plain and complete Instruction Book, included free, you can put the instrument to work at once, with the assurance of perfect accuracy and the pleasure of knowing you are doing superior work.

### Get This FREE Book

Be alert to this great opportunity! Don't let negligence rob you of this chance—it may be the turning point in your career. Fill in the Coupon, mail it NOW and get your Free copy of this booklet, "Be a Bigger Builder." Success comes to the energetic. In fairness to yourself—investigate.

**A. S. ALOE CO.,** 1808 Olive Street ST. LOUIS, MO.

### MAIL COUPON TO-DAY

A. S. ALOE COMPANY,  
1808 Olive Street, St. Louis, Mo.

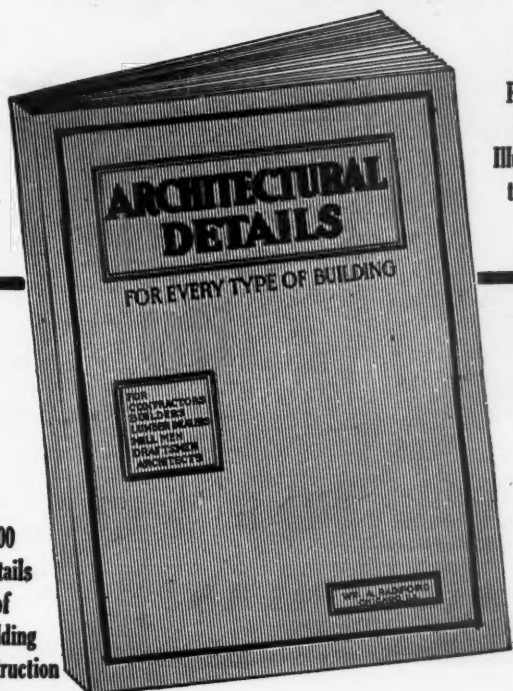
Without obligation, send me FREE your book, "Be a Bigger Builder." Also full particulars about the "3-F" Convertible Level and details of your Easy Ownership Plan.

Name.....

Address.....

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Pages  
of  
Illustra-  
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of  
Building  
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"ARCHITECTURAL DETAILS" is a complete manual of building practice, as applied to carpentry, construction and the use of millwork. It is a remarkable collection of full-page plates, accurately drawn and reproduced to exact scale, showing clearly every detail of modern building construction and finish. These plates make plain the framing and construction of residences of every type. This volume, 9 x 12 inches in size, has 160 pages of illustrations. All dimensions, angles, measurements and joints are made so plain and are so well illustrated that the man on the job will have no difficulty or trouble doing the work.

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postpaid, a copy of your book, "Architectural Details."

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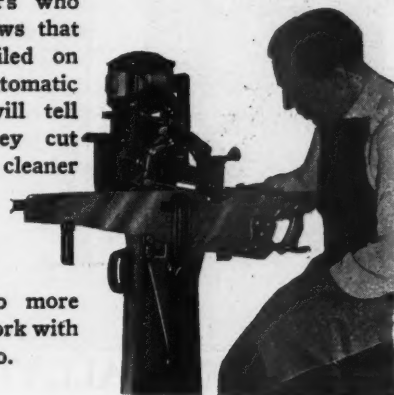
P. O. .... STATE.....

My occupation is (Check Only One)

☐ Dealer ☐ Builder ☐ Architect ☐ Real Estate ☐ Miscellaneous

## "My Saws Sure Cut Better Since I File Them on My Foley"

Carpenters who have used saws that have been filed on the Foley Automatic Saw Filer will tell you that they cut faster, truer, cleaner and stay sharper longer than hand filed saws. They can do more and better work with less effort, too.



## FOLEY AUTO MATIC SAW FILER

## Keeps All Kinds of Saws in Perfect Cutting Condition

Files all kinds of hand saws—rip, cross-cut, back, panel, keyhole, mitre and others—band saws 1/8" to 4 1/2" wide and cross-cut circular saws 3" to 24" diameter. Evens every tooth to uniform height, size and spacing, so every tooth cuts, at the same time it files. Files teeth from 3 to 16 points to the inch and puts the proper bevel on cross-cut saws, automatically, with such mechanical accuracy that saws are filed better than the most expert hand filing. Uses standard 3-cornered taper files.

## You Can Make Extra Money Filing Saw for Others, Too

Contractors and other carpenters will give you their saws to file on your Foley when they see what fine work it does, and how much better Foley Filed saws cut. You can do this work in your spare time and make enough extra money to pay for your machine.

## FREE PLAN Tells You How

Hundreds of carpenters and contractors using our FREE PLAN are making extra money filing saws for others. You can do it too. Write TODAY for complete information—you'll have better cutting saws and make extra money too.

## Foley Saw Tool Co., Inc.

340 Foley Bldg., 11 Main St. N. E., Minneapolis, Minn.





### The INSTALLATION IDEAL

TOILET enclosures, shower stalls and wainscoting of *Struco Slate* in the Wykagyl Country Club, New Rochelle, N. Y., are typical of the many installations made possible with the use of this natural product. Its colorful, highly polished, everlasting finish, in a selection of over sixteen beautiful veined, spatter and plain designs is the ideal material for every installation. A book on *Struco* gladly sent on request.

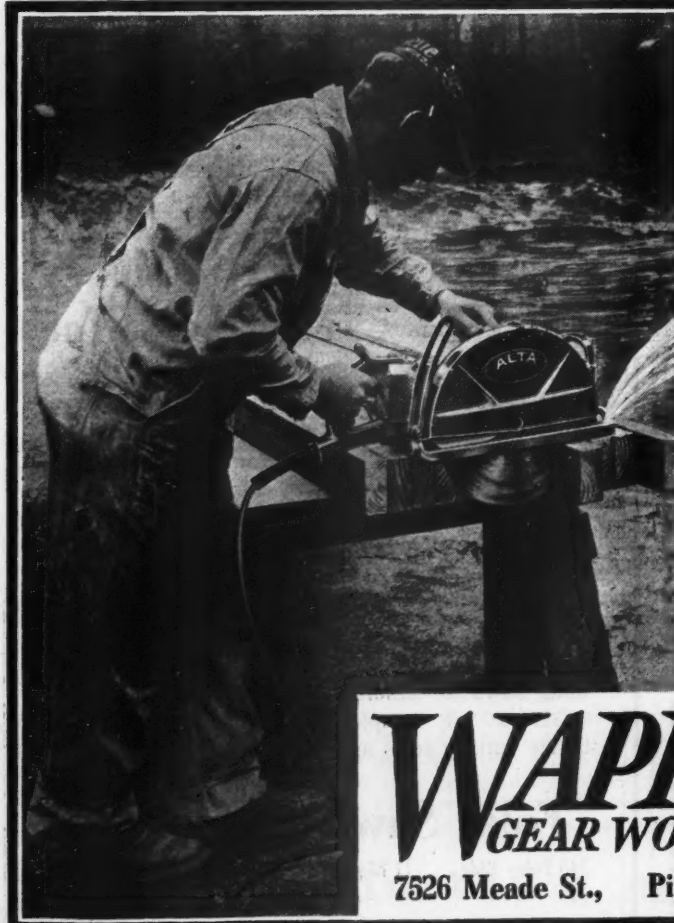


Your request, on your business stationery, directed to the address below, will bring you a beautiful paper weight in *Struco*

## THE STRUCTURAL SLATE COMPANY

430 Robinson Avenue

Pen Argyl, Penna.



# SPEED

No matter what kind of work, inside or outside, the Alta Electric Hand-saw will do it ten times faster and more accurately. Ask your dealer about it or write to us for a demonstration.

**Depth Adjustment-Tilting Base  
Three Sizes**

**Mortisers—Planes—Saws**

# WAPPAT

GEAR WORKS, INC.

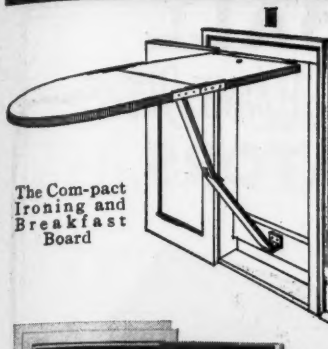
7526 Meade St., Pittsburgh, Pa.

Please demonstrate on my job.

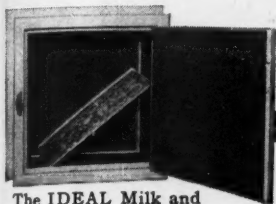
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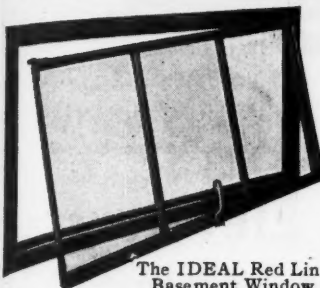
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The Com-pact Ironing and Breakfast Board



The IDEAL Milk and Package Receiver



The IDEAL Red Line Basement Window



The IDEAL Coal Chute

## Group Selling of IDEAL Steel Products yields positive monthly PROFIT!

Profit in IDEAL Steel Products is *not* a matter of capital or quantity buying! For here is a plan through which building material dealers, who buy but little at a time, can make a profit-per-job which compares favorably with car-load buyers, when these products are ordered *as a group*.

There are six building specialties available for you to sell. Check the coupon below for a complete description of the IDEAL Group Selling Plan, and further details on IDEAL Steel Products.



Attention of  
Mr. T. F. O'Connell,  
Sales Manager

The six IDEAL Steel Products referred to are

The Com-pact Ironing and Breakfast Board

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The IDEAL Red Line Basement Window

The IDEAL Coal Chute

The IDEAL Clothes Chute

The IDEAL Dust Chute

\*Not illustrated

### Ideal Steel Products

308 N. Michigan Ave., Chicago

Please send details of the IDEAL Group Selling Plan.

Dealer.....

Address.....

Attention of.....

MEN who have a following among building supply dealers can profitably handle the IDEAL Group Selling Plan as a side-line or in their full time. If you are interested, describe yourself to us. Address your letter to Mr. O'Connell.

## All the Operations You Need IN ONE MACHINE

# SIMPLICITY COMBINATION WOODWORKER



8 machines in one

28 important operations on one machine

### Buy one machine instead of eight

Individual machines use more power, take up more shop room and cost more money. SIMPLICITY Woodworker is far more economical for small shops. Without attachments it will do three-fourths of the machine work in the average shop, including all kinds of sawing, jointing, planing to thickness, rabbeting, tenoning, panel raising, boring and speed spindle work. Band saw, upright spindle shaper and lathe attachments if desired.

### A man sized machine, not a toy or a freak

Do not confuse SIMPLICITY Woodworker with toy machines. It is not a plaything, but a practical durable machine that does real work fast and accurately. Simple, strong, safe. Small floor space, small investment, small upkeep. Ample power for all ordinary work in the shop or on the job.

### Save time, labor, money

SIMPLICITY Woodworker cuts labor costs, speeds up production and increases profits. No other machine can do so many kinds of practical work.

### Make money all the year 'round

Earn big profits in cabinet making, sash, fly screens, furniture novelties and hundreds of other profitable items. Special free service to SIMPLICITY owners to help them turn their dull seasons into big profits.

### Pay as you earn

SIMPLICITY Woodworker will pay for itself many times over, through increased output and lower costs. Buy a SIMPLICITY on our long time payment plan and make it pay for itself from its own earnings.

Write for complete information and prices. The coupon below will bring our remarkable offer by return mail.

COMBINATION WOODWORKING MACHINE CO.  
551 W. Randolph St., Chicago, Ill.

MAIL THIS COUPON FOR MONEY-MAKING INFORMATION

Date.....

COMBINATION WOODWORKING MACHINE CO.  
551 W. Randolph St., Chicago, Ill.

Send me full information on Simplicity Woodworker:

Name.....

Address.....

City..... State.....





Bakelite Molded door knobs in various colors and finishes, made by National Brass Co., Grand Rapids, Mich.

## Door Knobs of Bakelite Molded to match wood finishes


**M**AHOGANY, walnut, oak and other wood finishes may be matched in Bakelite Molded door knobs. The whole appearance of a door is improved through the use of knobs, roses and key escutcheons in complete harmony with its color and finish. The effect is very pleasing and always invites favorable comment.

These door knobs of Bakelite Molded have other advantages in addition to good looks. They cannot corrode or stain and their finish and color are lasting. Polishing is never required. They are very hard and strong, so chipping or fracture is practically unknown. The price of these superior Bakelite Molded Knobs is so reasonable that it is possible to use them in all classes of buildings.

Examine these Bakelite Knobs and get prices before ordering door-hardware for your next job.

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247 Park Avenue . New York, N. Y.  
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## KIMBALL STRAIGHT LINE DRIVE ELEVATORS

**CHIEFTAIN---A  
New Eppley Hotel  
at Council Bluffs,  
Iowa**

*Equipped with Kimball  
Elevators*



## Passenger Elevators

In the office building, where the absolute certainty of elevator service is an essential, it is interesting to note that the type of elevator construction is pointing towards the Kimball Straight Line Drive Elevator Machine, as the most practical solution for the builder who figures the upkeep, as well as initial cost.

The simplicity of Kimball Straight Line Drive construction, its fewer parts to get out of order, forms a sane contrast to older style double unit type, still much in use.

If you are interested in Kimball efficient elevator installations you can secure valuable information and literature on the Kimball Straight Line Drive Elevators by writing to this address:



**KIMBALL BROS. CO.**  
COUNCIL BLUFFS IOWA

989-97 Ninth Street

Council Bluffs, Iowa

*Elevator Builders for 45 Years*

## Down Where the Leaks Begin

ONE inch below the surface of the ground—that's where moisture begins to gnaw at foundations, cellar and basement floors. It eats its way into all lithoid structures—causing disintegration which results in damp, unhealthy conditions. These conditions, in time, spread the effects of general decay.

Moisture, flood water and springs beneath your excavations—all can be coped with successfully, by surfacing the floors and foundations, inside and out, with 1:2:3 Hydro Proof. The Hydro Proof formula assures a water-tight surface to all floors, foundations or other parts of a structure to which it is applied. Moisture simply can't get in; nor can the surface be damaged by the chemical reactions of process alkalies and acids.

Hydro Proof 1:2:3 formula is the ideal solution for all floor repairing and resurfacing problems.

For a roof coating that will protect against the elements for years, without the sign of a leak—use our BRUSHING PLASTIC.

For coating metal against corrosion—apply BITUMET.

For an interior or exterior surface preservative where light is essential—try our aluminum-asphalt paint—SILVER SEAL.

*Mail the coupon below for specification sheets, prices and detailed information.*

THE ASPHALT PRODUCTS CO., Inc.  
703 Free Street                      Syracuse, N. Y.

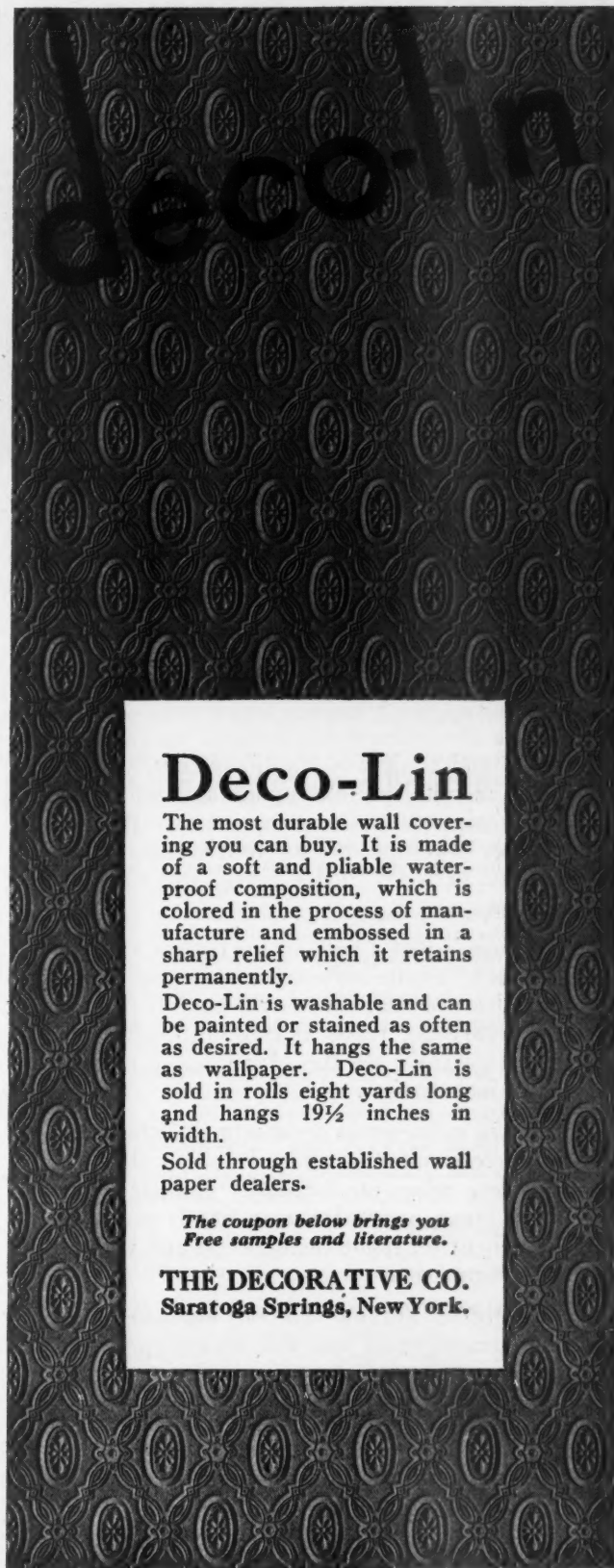
### Mail This Coupon

THE ASPHALT PRODUCTS CO., INC.,  
703 Free Street, Syracuse, N. Y.

Without obligation, please send me complete information, specification sheets and other detailed information about

- ☐ 1:2:3 Hydro Proof      ☐ Bitumet  
☐ Silver Seal              ☐ Brushing Plastic

Name .....  
Address .....  
City....., State.....



## Deco-Lin

The most durable wall covering you can buy. It is made of a soft and pliable water-proof composition, which is colored in the process of manufacture and embossed in a sharp relief which it retains permanently.

Deco-Lin is washable and can be painted or stained as often as desired. It hangs the same as wallpaper. Deco-Lin is sold in rolls eight yards long and hangs 19½ inches in width.

Sold through established wall paper dealers.

*The coupon below brings you Free samples and literature.*

THE DECORATIVE CO.  
Saratoga Springs, New York.

The Decorative Co.,  
Saratoga Springs, N. Y.

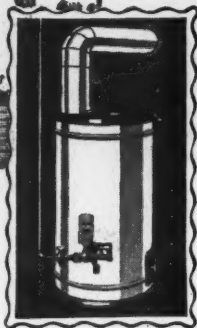
Please send me Free Samples and Literature:

Name.....  
Address.....  
Town.....  
State.....





## The home with INCINOR has more to offer



Build and equip two dwellings exactly alike. Then install INCINOR in one and see which home ninety-nine women out of 100 will choose. INCINOR is the touch that differentiates between "just a house" and a *modern dwelling*.

INCINOR is just a trifle in the cost of a house, but such "a trifle" often clinches a sale. People have learned that "*the decent way*" is to burn their garbage, trash and rubbish with gas. They instantly see the advantage of modern home incineration.

Built-in incinerators are costly and often clog up, become odorous and a breeding place for roaches, mice, etc. Simple, compact, gas-fired, inexpensive, INCINOR fulfills every requirement for home incineration and without these drawbacks.

Investigate INCINOR—find out how effectively it functions—and you will *always* specify it.

*See it at your local gas office, your INCINOR dealer's, or write direct for full information*

HOME INCINERATOR Co., Security Building  
Milwaukee, Wisconsin

**INCINOR.**  
THE HOME INCINERATOR  
*Good Riddance*  
GARBAGE · RUBBISH · TRASH



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FIRST COST + { LABOR BREAKAGE = ACTUAL COST  
REPLACEMENT

## Actual Costs Prove These All-Steel Pulleys



## the World's Greatest Value!

Though it has been repeatedly demonstrated that Grand Rapids Pulleys will outlast the buildings in which they are installed, their first cost is no greater than that of ordinary cast iron pulleys.

In **ACTUAL COST**, therefore, they are infinitely cheaper; for they completely eliminate breakage and replacement, and cut labor to the irreducible minimum. They are perfectly uniform—always fit the mortise—guaranteed trouble-proof.

Literally millions of these pulleys are still operating perfectly after more than 30 years of service—forcibly demonstrating how well it pays to standardize on the Grand Rapids line.

There's a type to meet every requirement.

Twenty Models in Ball Bearing, Cone Bearing and Axle Bearing types.

*Sold by leading jobbers everywhere*

GRAND RAPIDS HARDWARE CO.  
556 Eleventh St.  
GRAND RAPIDS, MICHIGAN



# PEERLESS

## Building Specialties



### THE PEERLESS FIREPLACE DAMPER

## Its Absence May Cause A Smoky Fireplace

In spite of the architect's and builder's efforts fireplaces are frequently more ornamental than useful. Contractors are not usually fireplace experts and with all the many possibilities of going wrong in building the fireplace throat the builder should take every precaution to insure correct construction. The use of a Peerless Fireplace Damper automatically gives the correct width, height and taper to the throat and permits draft control which is essential for an even burning fire. When the fireplace is not in use the closed damper door keeps out falling soot, rain and insects. A fireplace necessity.

### Other Peerless Home Conveniences

**COAL WINDOWS ASH DUMPS**

**ASH PIT DOORS**

**PACKAGE and GARBAGE RECEIVERS**

PEERLESS MFG. CO.,

14th & Ormsby  
Louisville, Ky.

4-29

Kindly Check

☐ Contractor ☐ Architect  
☐ Home Owner ☐ Dealer

Please send Peerless Fireplace Damper Information.

☐ Other Building Specialties.

Name.....

Address.....

Town..... State.....



## ARCHITECTURE

### Learn at Home

HUNDREDS of men have become successful architects through the home-study courses of the International Correspondence Schools.

The textbooks are complete and practical, and are so well regarded by educators that they are used by many leading colleges and technical schools, including Cornell, the Iowa State College of Agriculture and many others.

George A. Griebel, who was a stone cutter when he enrolled with the I. C. S., is now making \$10,000 a year and was Superintendent of General Construction for the State of Ohio for two years before he opened his own office.

Ralph M. Snyder, another I. C. S. student and a former clerk, earned \$12,000 the first year he started in business for himself as an architect. The Equitable Building in New York City was erected under the direction of I. C. S. Student H. S. Gardner, then Superintendent of Construction for the Thompson-Starret Co.

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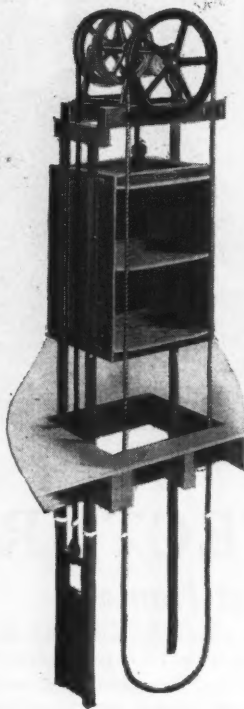
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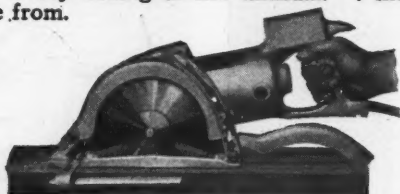
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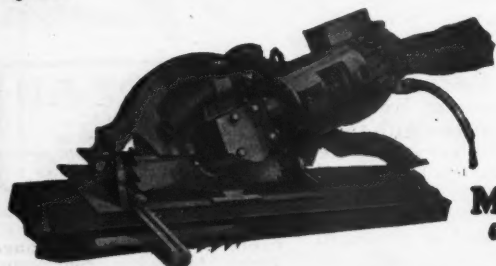
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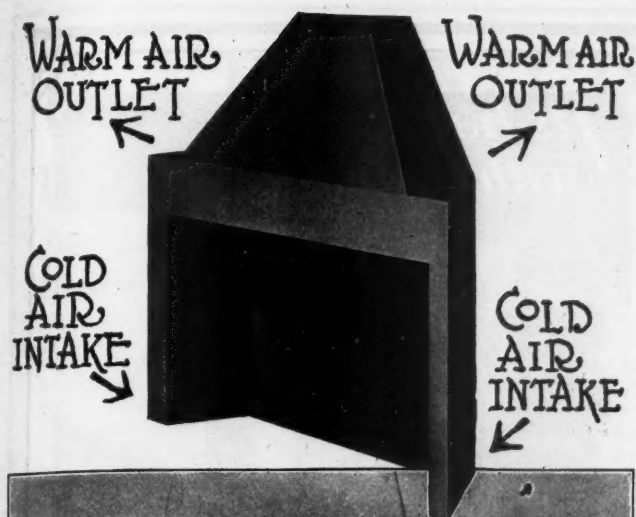
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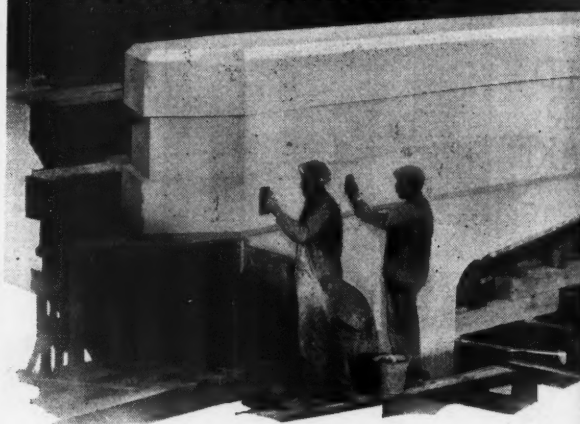


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**Q**Leaves a smooth, uniform finish—saves time—saves labor.

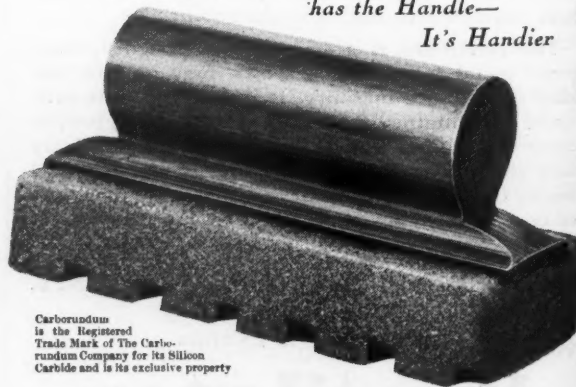
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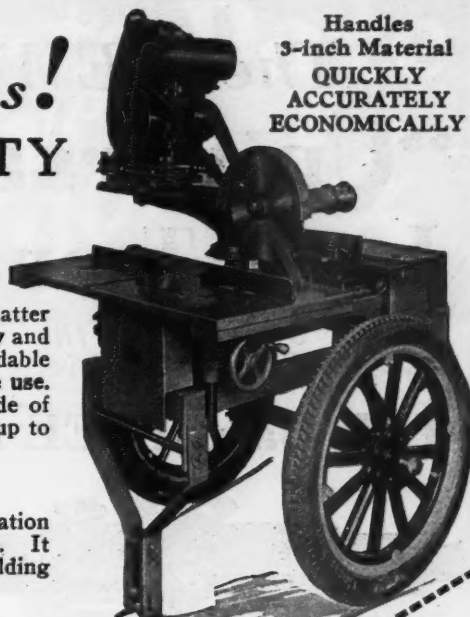
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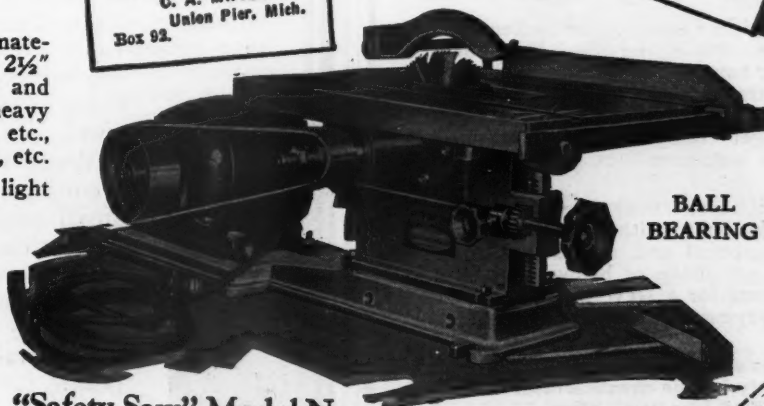
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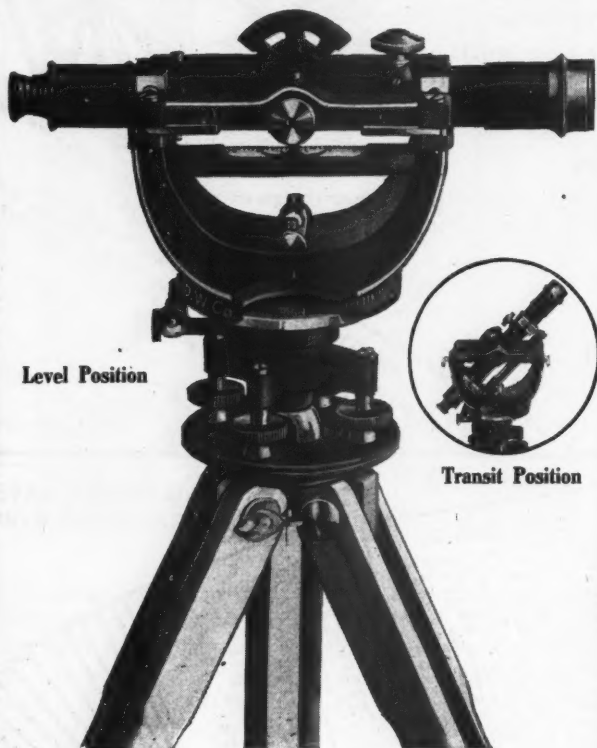
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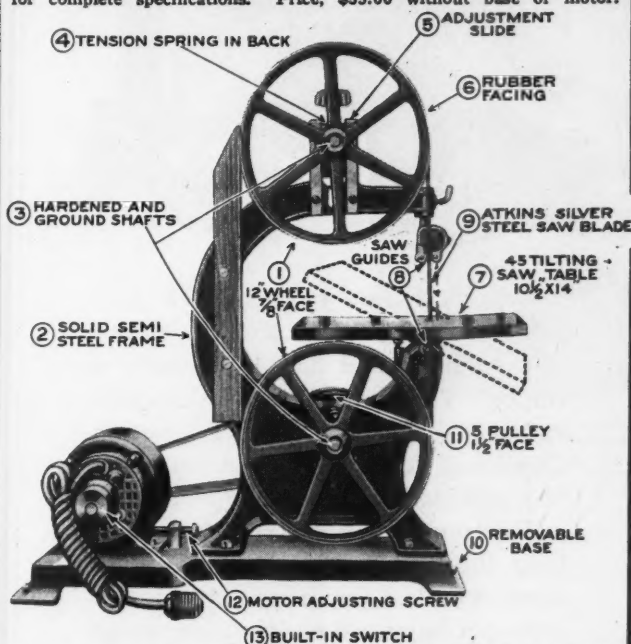
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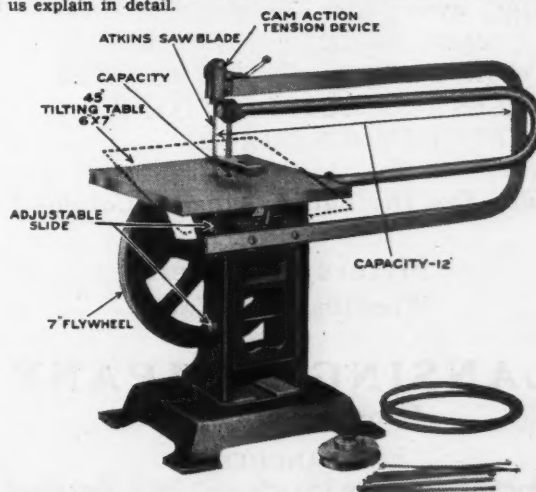
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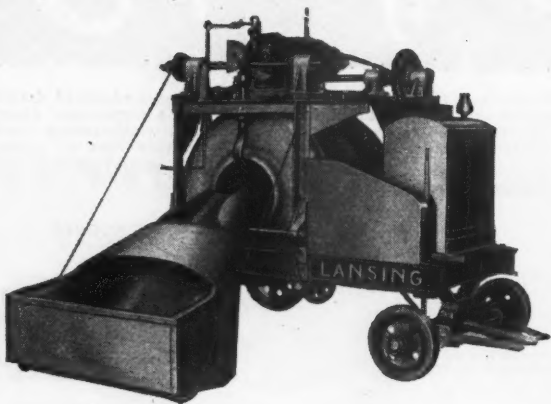
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MINNEAPOLIS SAN FRANCISCO KANSAS CITY

# Lansing

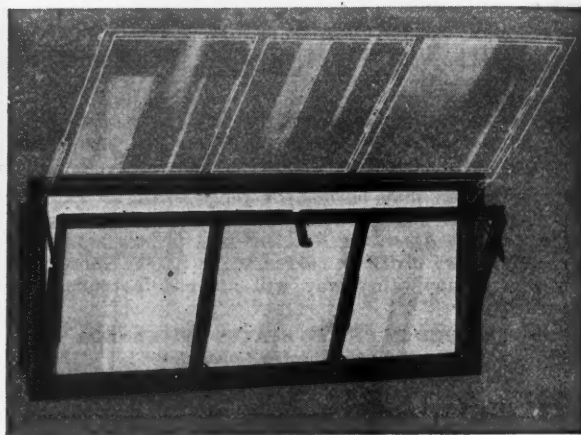
[THERE'S A LANSING DEALER IN YOUR VICINITY]

# VENTO PUTTYLESS STEEL WINDOWS

*"Glaze Without Putty"*

## Lead All Other Sash

*Increase Your Sales and Profits  
—Be the Dealer in Your City  
or Town to Sell "VENTO"*



(Pat. U. S. Pat. Off. 3-4-24, 12-11-28—Other Pats. Pending)  
Manufacturers and sellers of an infringement will be prosecuted

**Made of 12-Gauge Steel**

**Electrically Welded at Every Joint and Muntin**  
(NO RIVETING)

*Sheds Water Outside—Has  $\frac{3}{8}$ " Water Drip Sill*

Only window made with Two-Way Ventilator—opens full wide (as other sash)—also opens in at top, giving Overhead—Indirect Ventilation—1929 Stage Opener allows Window to be opened at any point and "STAY PUT" (no direct draft). Every "Vento" Puttyless Steel Window drilled to be fitted with a flat metal bound 16-mesh Wire Screen or Storm Sash—another Profit.

Puttyless—saving cost of putty—and glazing. Pane of standard size glass is held against a cushion of cork (bed putty) by "Vento" Patent Glazing Clips. Anyone can glaze in no time.

**Sell the Contractor and Builder the Best Steel Window Made and Help Them Sell Their Buildings at More Profit**

"Vento" sold only thru the lumber and building supply dealer—and "not all of them". 100% dealer distribution. Be the dealer in your city to sell "Vento" Products—and make money.

Write for literature illustrating the Basement and Factory Type "Vento" Puttyless Steel Windows and prices.

Over 2,000 Satisfied Dealers in Canada and U. S. A. from Coast to Coast

**PUTTYLESS FACTORY TYPE—BARN—GARAGE—  
BASEMENT WINDOWS and STEEL COAL CHUTES**

MADE BY

**VENTO STEEL SASH CO.**  
MUSKEGON MICHIGAN

*New York Life Insurance Building. Architect, Cass Gilbert. This building is Tontine-equipped throughout.*

## These washable window shades

*...help you sell the houses you build*



**D**U PONT TONTINE, the nationally advertised washable window shade, that may be kept always clean and attractive, gives you one more talking point when showing prospects through the houses you build.

Women like these washable shades. And no wonder! An occasional application of soap and water instantly restores their original freshness and beauty. No more dirty, smudged shades that must be thrown away. Less money spent for replacements. For Tontine window shades can be always clean and spotless. And they are built to last season after season.

Tontine window shades are impregnated with pyroxylin, the same basic substance which accounts for the durability of the famous du Pont Duco. This treatment keeps them from cracking, pinholing, fraying,—prevents spotting and staining in rain. Nor will sunlight fade them.

Install Tontine in your houses. Point out its advantages to women. You will find it a definite selling aid.

To assure maximum shade service and satisfaction, ask your dealer to mount your Tontine shades on the companion product—Tontine Rollers.

E. I. DU PONT DE NEMOURS & CO., Inc.,  
Newburgh, N. Y.

*Canadian Distributors:*

Canadian Fabrikoid Limited - New Toronto, Ontario, Can.



# TONTINE

REG. U. S. PAT. OFF.

## THE WASHABLE WINDOW SHADE



E. I. DU PONT DE NEMOURS & CO., Inc.  
Desk AB-2, Newburgh, N. Y.

Please send me sample and full information about Tontine, the washable window shade.

Name.....

Address.....

## BRICK—MORTAR—CEMENT

Take it up with an

# O-K

## PORTABLE ELEVATOR

Height  
Changed  
at Will



We manufacture a complete line of Hoisting Machinery and Air Compressors, Gasoline Power, Electric Power, Belt Power. Consult us before you buy.

**Strong  
and  
Safe**

Contractors and Builders endorse the O. K. Elevator—because it eliminates costly wood towers, is easily made any desired height by adding 10-ft. sections. Is readily portable and can be erected or dismantled in a small amount of time without skilled labor.

The O. K. Elevators are of all-steel construction, electric welded. They come equipped with a single-drum O. K. Hoist and 8 or 12-H. P. Gasoline Engine or Electric Motor. 100-ft. of  $\frac{3}{8}$ " wire rope, steel platform and steel carriage guides complete the outfit. It's ready to set up and run when you get it. Nothing else to buy.

*Write for catalog containing full information and specifications. The coupon is for your convenience*

**O. K. Clutch & Machinery Co.**  
Columbia, Pennsylvania

O. K. CLUTCH & MACHINERY CO.  
Columbia, Pa.

Please send your latest catalogs of equipment as checked.

☐ PORTABLE ELEVATORS ☐ HOISTS ☐ PORTABLE AIR COMPRESSORS

Name.....

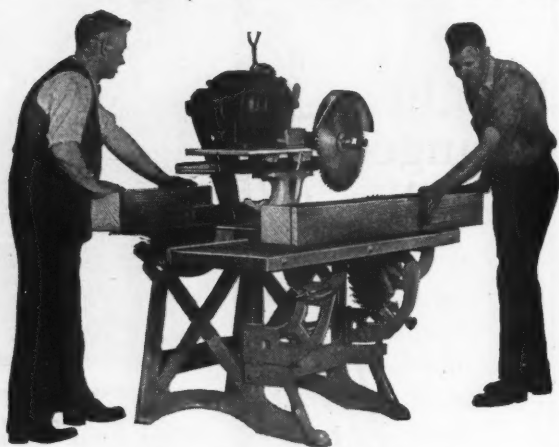
Address.....

City.....State.....



# MASTER WOODWORKER

## New Catalogue Just off the Press



You will want this catalogue. It describes in detail the construction of the NEW MASTER, its operations, its uses and how it

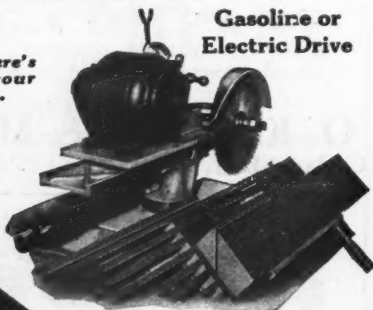
**CUTS LABOR COSTS  
SAVES TIME  
BOOSTS PROFITS**

It will prove of value to those vitally interested in doing their work in the *quickest, easiest, safest and most economical manner.*

The NEW MASTER is the outgrowth of 15 years' experience in the manufacture of woodworking machinery. It has the same reliability, quality and accuracy that characterized the former Master, plus many new improved features.

Before you buy, investigate the *safety and the rugged, lasting quality* of the NEW MASTER. Don't buy an inferior machine and be sorry afterward. **MAIL THE COUPON.**

5 models. There's one to fit your requirements.



Gasoline or Electric Drive

Bevel ripping. Table tilts to allow a 45 degree rip.

**MASTER  
WOODWORKER**  
Congress & Brush Streets  
Detroit, Michigan

Please send new catalogue, prices and easy payment plan.

(B)

NAME.....

ADDRESS.....

## "For Sale" signs should not stay on the job

### *Oak Flooring helps to sell houses quickly*

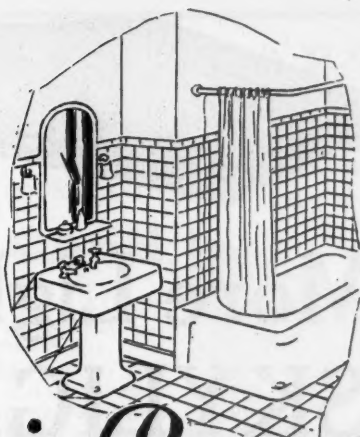
LIKE everything else offered for sale, a house is considered point by point before it is bought. Floors of oak upstairs and down are a mighty strong sales point. They have beauty, utility and a reputation for long wear and lasting attractiveness. They are a standard of value.

When a prospective buyer inspects a house, he may take many things for granted. But he judges the floor for himself. He sees it. He walks on it. And he taps it with his foot. If floored with oak he readily feels that here is a really fine house. It has a rich mellowness of color that one associates with the craftsmanship of old-time woodworkers. It has a flavor of aristocracy. It's so solid and strong. It must be worth the money. *Such is the regard for oak.*

It doesn't cost much to lay oak floors upstairs and down. The additional cost of oak as compared with soft woods is slight. Yet the sale-price is usually increased by hundreds of dollars. That's nice profit. And often the sale comes quicker because the flooring is oak. Definite data on comparative costs are available at all lumber dealers.

This advertising is published by the OAK FLOORING BUREAU, 1238 Builders' Building, Chicago. A bureau maintained by the oak flooring industry for the benefit of home owners and builders. Write us for helpful literature or advice on any flooring problem. Our technical staff is at your service without obligation.

*Oak Flooring advertising will be carried on during 1929 on an increased scale. Look for the advertisements in "House and Garden," "House Beautiful," "Good Housekeeping," "Better Homes and Gardens" and "The Literary Digest."*



## THE Magic Beauty OF CHROMITE

**K**ITCHENS are gayer—bathrooms are richer—halls are brighter—under the magic of CHROMITE.

Walls are given life—glittering newness with this modern wall covering.

CHROMITE endures for a lifetime. Its glossy flint-hard surface is waterproof, non-absorbent and easily washed.

CHROMITE is enamel baked on zinc sheets by a special process creating a metal tile of rare charm.

It is applied easily and quickly—like wall paper to old or new walls. There is no fuss, no confusion. Chromite costs but one-third as much as ordinary tile, installed.

Any color harmony you want is available in the wide range of rich tints.

Write for name of nearest dealer and attractive illustrated circular showing installations and describing Chromite.

**CHROMITE COMPANY**  
228 N. La Salle St. Chicago

An Artist's conception, in beautiful colors, of Aladdin and "The Magic Beauty of Chromite" for the kiddies to enjoy, mailed on request.



Unusually attractive territorial arrangements open for a few additional distributors.



# CHROMITE

FOR WALLS OF ENDURING BEAUTY

## BUY DIRECT FROM FACTORY

### BOSS MIXERS and HOISTS

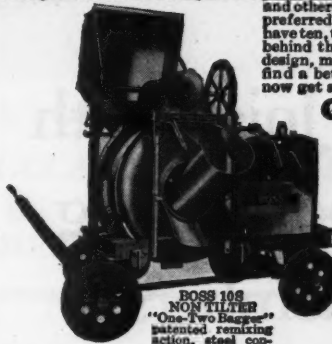
**YOU GET SALESMAN'S & JOBBER'S PROFIT!**

## SAVE \$42 to \$384 ON EACH MACHINE

Every manufacturer is trying to reduce his selling costs. We have found the way and are going to give the difference to our customers in order to increase our sales. We have done away with all our salesmen and jobbers and are now selling direct to users. We have deducted the salesman's and jobber's commission from each machine and the difference is our price to you. This is the most astonishing news in the construction industry and it is certainly paying us as sales are jumping by leaps and bounds. Get the new catalogue with new confidential wholesale prices on each machine. It shows the most popular types and combinations, describing each fully—with new price. The coupon will bring it.

### SAME HIGH QUALITY

Regardless of this drastic price cut, the quality of BOSS Mixers and Hoists remains the same. They have always been noted for their heavy duty construction and materials. Under no consideration will we ever sacrifice this reputation. Get the catalogue. Note the specifications and compare the prices. You get the same patented Re-Mixing Action and other exclusive features that have made BOSS preferred wherever used. Hundreds of BOSS machines have ten, twelve and fifteen years of continuous service behind them and still going strong. For quality of design, materials and construction we defy anyone to find a better built machine than a BOSS. You can now get all this for less.



BOSS 105  
NON-TILTER  
"One-Two Bagger"  
patented re-mixing  
action, steel  
construction, high  
speed performance  
with one man  
control.

### Get Our Prices Send Coupon for New Catalogue

With Confidential Wholesale Prices  
The new BOSS Catalogue gives complete information on all the BOSS Mixers, Pavers and Hoists along with the new confidential wholesale prices. Even if you do not want to order now, get this new catalogue and keep it on hand for future use. Fill in the coupon and mail today. It will save you money. Though you may have bought direct from a manufacturer before you have never been able to buy at these prices because no salesman's or jobber's commission is figured in. Prices on every machine are greatly reduced. Get the new catalogue with wholesale prices.

### A COMPLETE LINE

We make over 75 various sizes, combinations and types of BOSS Mixers, Hoists and Pavers. There is a type for every conceivable use. Get the new catalogue first, then decide. Often our customers find that they can use a much lower priced machine after studying this catalogue. There is no need of going elsewhere for a certain machine when it is in the BOSS line. Write for catalogue and confidential wholesale prices; also give us information on kind of work you want the machine for. We can probably be of help to you.

### 1 YEAR GUARANTEE

**GUARANTEE**—All BOSS equipment is guaranteed for one year against defective materials and inferior workmanship. Any parts proving defective will be replaced free of charge (electrical or engine equipment excepted, as this equipment is guaranteed by the respective engine manufacturers) upon return to us of defective parts, carrier charges prepaid for our inspection.  
American Cement Mach. Co., Inc.

### 5 DAYS' FREE TRIAL

So confident are we that every BOSS Mixer and Hoist will give complete satisfaction, that we offer you five days' free trial. Order a BOSS. Use it in the field. If within five days you do not find it exactly as represented in every way, send for return instructions and refund of purchase price. This protects you; you can't go wrong on a BOSS. As long as we have sold on this basis, we have never had a customer demand his money. This proves BOSS quality. Every BOSS machine is backed up with an iron clad guarantee. Read it above.

THE BOSS 3 1/2 S NON-TILTER. One half bag drum type trailer mixer with 2 disc wheels, cushion rubber tires, batch hopper, 2 HP Stover engine, magneto, steel engine housing.

**CLIP AND MAIL THIS COUPON NOW!**

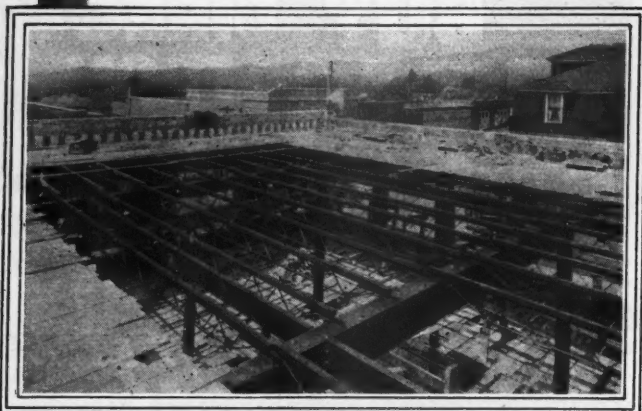
### GET OUR PRICES

CLIP AND MAIL THIS COUPON  
AMERICAN CEMENT MACHINE CO.,  
216 S. Fourth St., Keokuk, Iowa.

Send me your new catalogue showing complete line of BOSS Mixers, Pavers and Hoists with confidential wholesale prices.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
Town \_\_\_\_\_ State \_\_\_\_\_





Massillon Nailer Joists in position to receive wood roof on Joines Motor Co. Garage, Brevard, N. C. S. Sternberg & Co., engineers.



## Steel Joists with Wood Nailing Members

**T**HESE joists provide every advantage of the famous Massillon Bar Joist except where a strictly fireproof floor is desired. Wood flooring or roof decking is nailed directly to the top member of the joist. Any type of ceiling can be attached to the bottom bars. Nailer Joists are rigid and prevent sagging floors and cracked ceilings. Their open web design facilitates the installation of plumbing and conduits.

Massillon Nailer Joists are made in standard stock sizes to meet all span and load requirements. No cutting or fitting is necessary. They are light and easily handled into position. Used in all types of buildings, these joists provide the strength and rigidity of steel at a cost comparable to wood joists.

*Send for literature and  
safe loading tables*

THE MACOMBER STEEL COMPANY  
909 Belden Avenue Canton, Ohio

# MASSILLON NAILER JOISTS

Massillon Products are manufactured and distributed in Canada by the Sarnia Bridge Co., Ltd., Sarnia, Ont.



Style No. 10S

## More Light on SKYLIGHTS

You never guess—you know beforehand your profit on a WILLIS skylight installation. You are sure of a job exactly fitting your specifications. There won't be any cutting, trimming, or any altering to be done. In fact, the shears can be left in the tool box.

Neither is there any call for skilled, high priced labor. Turn the whole job over to an ordinary workman with a screw driver and hammer.

Once installed, a WILLIS skylight can be promptly forgotten as far as you are concerned. No future servicing to eat into your profit. With built-in strength far in excess of service demands, there is no danger of any sagging, buckling or bending.

When you specify WILLIS you get a strong, clean-cut masterful product that is guaranteed you by our 30 years' experience, our insistence upon the best materials and labor and our practice of trial assemblage before your order is ever shipped.

Our complete line is shown, our complete story is told in our big catalog on sheet metal products. You will need it as a reference book. It's FREE. Send for it today.

## WILLIS MFG. CO.

Dept. 128

Galesburg, Illinois



Style No. 70S

*Standard and special sizes. Send  
your specifications for estimates.*

# THE NEW CARTER POWER PLANE

(THE FASTEST IN THE WORLD)

— A UNIT OF THE EXCLUSIVE CARTER DOOR SET —

(NOW USED BY NEARLY 2500 BUILDERS)

AT THE RIDICULOUSLY LOW  
PRICE OF

**\$112.00 CASH**

(SEND CHECK WITH ORDER)

30 DAY TERMS - - - \$118.00

(REFERENCE—The Liberty National  
Bank of Syracuse, N. Y.)

It planes any edge up to 2½", either straight or bevel and cuts fast, smooth, and flat without effort—it's electric. You can't match its work by hand—it will out perform three men easily. Weights only 10 pounds. Is supplied with bench bracket for jointing and grinds its own cutters.

The Carter Hinge Butt Router avoids all mistakes in cutting for butts, insuring a perfect fit always—many times as fast as by hand. Same templet for both door and jamb.

The Carter Lock Mortiser slogan is "A Mortise A Minute". (Cutting time less than 30 seconds)



Folder "A" describes the only door set

THIS TRIM SEASON WILL BE A PARTICULARLY SUCCESSFUL ONE IF YOU

**CARTER - I Z E**

**THE R. L. CARTER CO., 1302 CHESTNUT ST., PHOENIX, N. Y.**



## CROWE SAFETY BEVELING SAW

*cuts angles with the speed of cross-cuts*

And it cuts them ten times as fast as one man with an ordinary saw. Makes those difficult jobs easy. Makes a correct bevel. Saves your men for other work by taking the drudgery out of the job.

Absolutely fool-proof. It has been approved for safety by industrial commissions, listed as standard by Underwriters' Laboratories, and recommended by insurance companies.

Just mark the place to be cut, plug into the socket, press the trigger—that's all there is to it. Employer and employee both prefer it to trim flooring, make window frames, cut joints, studding, sills, frames, cut rafters at an angle, rout for stair risers. The line is always in sight.

Body of saw is of aluminum alloy, making it light and easy to handle. Every part is machined with accuracy and precision and is interchangeable.

Saw shown in illustration is beveling 2-inch undressed material. Saw blades are standard and retain their cutting edge exceptionally well.

A G.E. motor supplies the power, and operates on 110 or 220 volts, using a No. 10, two-conductor cable. Crowe saws do not heat up, and will stand the gaff longer than any similar machine on the market.

Get acquainted with this wonderful time and money saver. Write today for further information.

**"CROWE SAFETY SAW"**  
CUTS THE COST

Standard blades  
used  
Made in four sizes

**Crowe Manufacturing Corporation**  
317-321 Sycamore Street  
CINCINNATI, OHIO, U. S. A.

Dealers in All Principal Cities

Crowe Mfg. Corp.  
Dept. A, Cincinnati, Ohio

Gentlemen:  
I am interested in a saw of this type. Send further information.

Name .....

Address .....

City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

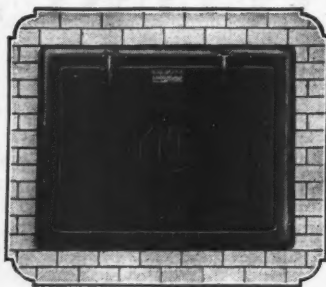




## "I'm glad you put in **KEWANEE**

*Copper Steel*  
**COAL CHUTES''**

"Whenever I put up a new residence, I usually pay little attention to coal chutes and basement windows, because I have always thought of them as just that much additional expense. However, you can bet your boots that from now on, it will be KEWANEE COAL CHUTES and BASEMENT WINDOWS in every building I put up. I am tired of having my basement openings mar the appearance of the whole building and these modern, attractive Kewanee Chutes are the last word in convenience and economy. I look upon them as an investment rather than as an expense."



## **KEWANEE Copper Steel BASEMENT WINDOWS**



main features of Kewanee Chutes and Windows is the fact that they fit into any style of architecture and remain attractive and serviceable for the life of the building.

Dealers: Write for our attractive offer

**KEWANEE MFG. CO.**  
409 Tremont Street KEWANEE, ILL.

The modern home demands modern basement openings that transmit maximum light and are always easy to operate. Kewanee Copper Steel Windows meet all requirements. Improving the appearance of any property increases its value. One of the

# Sana-bestos Tiles

PATENTED

for

*Homes, Apartments,  
Schools, Churches,  
Stores and Hospitals*



**S**ANA-BESTOS FLOOR TILES cost less than other types of approved flooring. They are easily and quickly laid in plastic cement by the average workman.

This modern indestructible flooring is moderate in first cost with no upkeep expense. It is not affected by acids or alkalines. Ink stains and marks of cigarettes are easily removed by washing with soap and water.

Sana-bestos Floor Tiles will not buckle, crawl, warp, wrinkle, loosen or turn up at the corners. The comfortable, non-slippery, resilient surface is not affected by traffic no matter how severe. The floor never wears rough or gritty.

Sana-bestos Floor Tiles offer a variety of color tones, including Black, Maroon, Red, Brown, Green, that harmonize with any artistic layout. (Sana-bestos Tiles cannot be manufactured in light colors.)

## **Sana-bestos Heavy Duty Tiles**

Sana-bestos Tiles for industrial use, are manufactured 1/2 inch in thickness. They may be laid either in our special plastic cement or in concrete. When laid in concrete, they may be used out of doors as well as indoors, with excellent results.

Descriptive literature sent upon request

**FRANKLYN R. MULLER, Inc.**

Manufacturers of Asbestone and Sana-bestos Tiles

204 Madison St.

Waukegan, Illinois

Established 1906

THRUSH  
REGULATOR

We like  
the House...  
...how about *the Heating Plant?*

A MODERN, up-to-date Hot Water Heating Plant, Thrush Equipped is one essential which home buyers are being educated to demand. If you provide that finest type of home heating, the homes you build will sell easier.

Hundreds of thousands of home seekers are reading of Thrush Equipment in seven national and trade magazines and every one of these messages is an advertisement for you if your homes are Thrush Equipped. Thrush System means Automatic Control of temperatures, greater convenience and much greater economy.

Ask your heating contractor!

H. A. THRUSH & COMPANY  
PERU, INDIANA

**THRUSH**  
SYSTEM OF HOT WATER HEATING

H. A. THRUSH & COMPANY  
Dept. B, Peru, Indiana

19

Please send me your booklet "Which Heating Plant for My Home?" I am interested.

Name \_\_\_\_\_

Address \_\_\_\_\_

My Htg. Contr. \_\_\_\_\_



## MAKING BIGGER PROFITS FROM THE BIG PAINT JOBS



Factories  
Hotels  
Hospitals  
Schools  
and other  
Public  
Buildings



## Put An HB Paint Spray to work for you

Get the profit on painting work that is now going to outside painters.

One man with an HB Spray outfit enables you to do the work of 4 to 5 brush painters—at a big profit to you. Does the highest quality work both inside and out.

Pays for itself out of the profits on the first one or two jobs—and continues to earn for you on that basis.



GAS ENGINE

## ONLY \$25 Monthly

Easily Paid Out of the Increased Income

Attractively priced—built complete by HB Industries—insuring higher quality, yet lower priced. Not assembled.

Highest quality throughout—ball bearing motor—silent spiral bevel drive—gives a readily portable outfit, which eliminates noisy breaking belts.



ELECTRIC

## 30 Days Trial

—at our risk on your job

We welcome comparative tests. That's why you can have 30 Days Trial of an HB. We know what your choice will be once you compare HB's quality and HB performance.

Check the coupon below for full information without obligation.

**HOBART  BROTHERS**  
Successful manufacturers since 1893

Box V-49

TROY, OHIO

ELECTRIC

-----Tear Off and Mail Today-----

HOBART BROS., Box V49, Troy, Ohio.

Without obligation send me complete details on the items I've checked below, together with liberal trial offer and easy monthly terms.

☐ Gas Engine Outfit

☐ Electric Outfit

Name.....

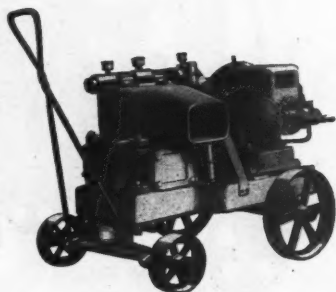
Address.....



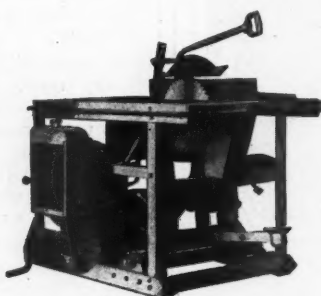
# C. H. & E.

Write for  
Complete Catalogue

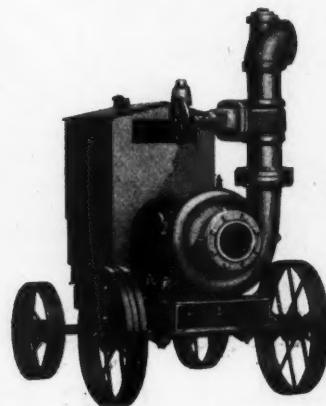
Saw Rigs—7 sizes: Triplex Pumps—4 sizes.  
Centrifugal Pumps—10 sizes: Trench Pumps—3 sizes.  
Lift & Force Pumps—4 sizes: Mortar Mixers—2 sizes.  
Hoists—9 sizes: Piston Pumps—3 sizes.  
Material Elevators—3 sizes.



MUD HEN DIAPHRAGM PUMP



NO. 28 SAW RIG



NO. 12 CENTRIFUGAL PUMP

**C. H. & E. MANUFACTURING CO., INC.**  
CLINTON AND MINERAL STS. MILWAUKEE, WIS.

## Contractors!—Let us help you Sell!



The above photograph comes from Paris, Kentucky. It is a picture of the Baldwin Brothers store front—design and steel by "International."

THE merchants in your town—do their stores need new fronts? Now is the time when aggressive merchants are thinking of the summer selling season which is just around the corner. Now is the time when you can interest them in a new store front—to help them increase their summer business.

Hundreds of contractors all over the country have used International Service to their profit in landing store front contracts. We will be glad to supply designs and estimates *free of charge* to all reliable contractors who appeal to us for this service. May we suggest that you write today for further information.

Ask for our new illustrated steel catalog.

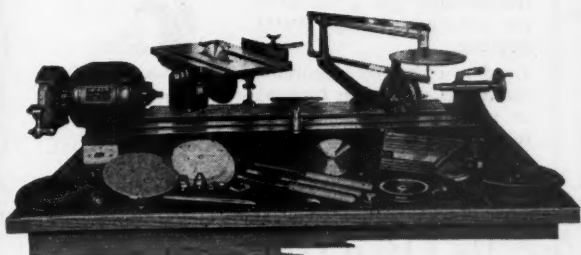
PRODUCTS of INTERNATIONAL  
Store Fronts - Steel Columns  
Steel Ceilings - Skylights  
Steel Windows  
Steel Girders - Steel Trusses

**INTERNATIONAL STEEL  
& IRON COMPANY**

DEPARTMENT 18  
EVANSVILLE INDIANA

PRODUCTS of INTERNATIONAL  
Sidewalk Lights - Coal Chutes  
Public Garages - Roof Ventilators  
Airplane Hangars  
—and many more listed in our Catalog!

## Here's the Portable Work-Shop You've Been Looking For



The convenience and saving in time afforded by a portable work-shop are so obviously advantageous to the contractor and builder as to need no elaboration here. What you want to be assured of is that the work-shop you buy has the power and the strength and the accuracy essential to its satisfactory and profitable use in your business.

Unhesitatingly we can assure you that the Ar-Con Utilitool in all these qualities measures up to the requirements of commercial use. From the sturdy  $\frac{1}{2}$  HP, ball-bearing, repulsion-induction type motor—the most efficient type built—to the wing screws and lock-nuts of drop-forged steel, every detail of this real man's work-shop is designed and built to insure an ample margin of power and strength and a long life of satisfactory service.

The complete Ar-Con Utilitool consists of a substantial, cast iron bed lathe—31 inches between centers; 8-inch swing—with grinding and buffing head; a circular saw table with 7-inch saw; jig and scroll saw; sanding disc and table; and complete accessory and tool equipment.

You owe it to yourself to learn all about this super-efficient portable work-shop—and there's no better time than right now.

**THE AR-CON TOOL COMPANY**  
500 FASSETT STREET TOLEDO, OHIO

# AR-CON

UTILITOOL

THE KING OF THEM ALL

### Easy to Buy

Ar-Con Utilitool units may be purchased singly or in any combination of units that meets your needs. Moreover, the purchase can be made by convenient time payments, if desired. Mail the coupon now for fully illustrated circular and complete price-list, with terms.

THE AR-CON TOOL COMPANY  
500 Fassett Street, Toledo, Ohio

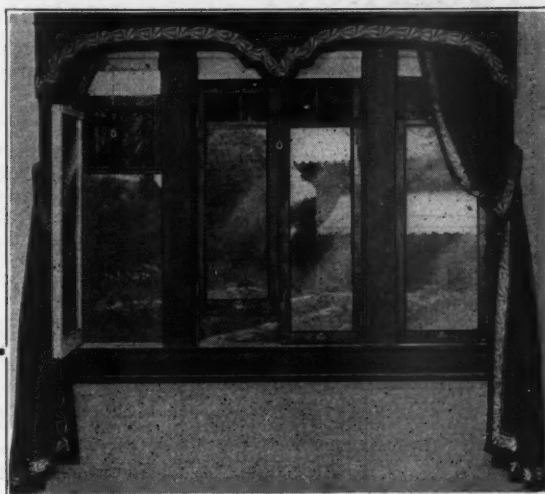
Please mail complete description and prices of Ar-Con Utilitool.

Name.....

Street Address.....

City and State.....B

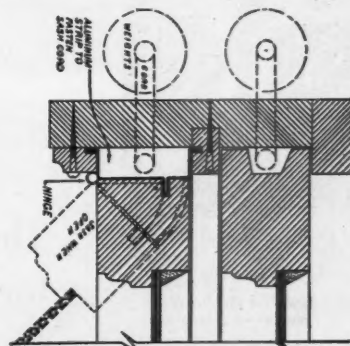
## Weatherproof Sliding Casement Windows



## A Perfect Casement Window

Nothing so adds to the appearance of a house and the pleasure of living in it as many cheerful casement windows—windows that invite the beauty of the outdoors into the comfort of your home—windows in keeping with the modern idea of light, ventilation and health. All objectionable features of casement windows have been removed.

**WEATHERPRUF**  
Casements are absolutely rain, dust and wind-proof. No special sash required. Any window frame may be equipped with this hardware.



Let us send you complete information.

**American Casement Window Hardware Co.**  
228 N. LaSalle St., Chicago

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# "The Boiler That Makes Its Own Gas"

## QUICK HEAT ODORLESS FOOLPROOF AUTOMATIC SILENT SAFE

# GAS-O-GEN

### Heating and Cooking

This modern method has revolutionized home heating.

### GAS-O-GEN

is the easiest, cleanest, safest, and least expensive way of producing gas for heating and cooking. Only coke and water used.

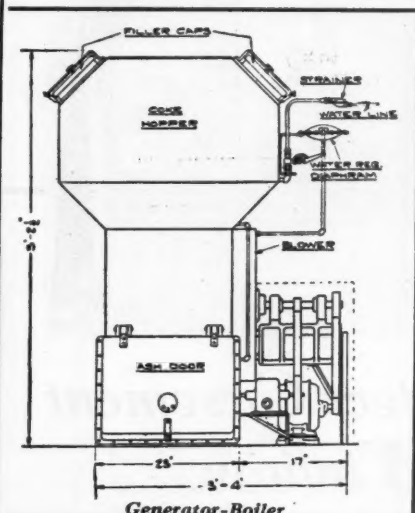
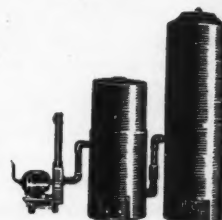
### Cooking Only

The unit at right is a small inexpensive gas generator for cooking and water heating.

Used with any standard make gas stove, gas burner, or gas heater. Installed in basement or outbuilding within 100 feet from kitchen stove. Only charcoal and water used.



*The comforts  
of civilization*



Generator-Boiler

## A Boiler Making Its Own Gas With a Surplus for Cooking

No Carbide — No Kerosene — No Oil — No Gasoline —  
No Pressure — No Storage.

### FULLY AUTOMATIC

Write for name of nearest representative. All sizes for homes, hotels and institutions. Industrial units for all purposes.

## DISTRIBUTORS WANTED

*Exclusive franchise. Write for our sales plan.*

**GAS-O-GEN CORPORATION**  
165 West Wacker Drive, Chicago, Ill.



Type 9001  
Applied without  
Hanging Strip



Type 2242  
Triplex  
Lavatory Spring Hinge

## TRADE **CHICAGO** MARK SPRING HINGES

## Quality

The constant and increasing demand for Chicago Spring Hinges indicates a universal recognition of their Quality and Value.

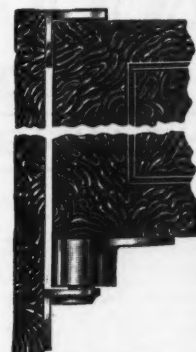
*Catalogue illustrating and describing our complete line will be sent on request. Send for Catalogue Y42.*

**Chicago Spring Hinge Company.**

CHICAGO NEW YORK  
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Type 2001  
Applied with  
Hanging Strip



Type 6007  
Sagless  
Gate Spring Pivot-Hinge

# Hot Water and Steam Heating Let Us Figure with You for Some of Your Houses

## Andrews Steel Boiler

Vertical and Locomotive Styles

Made by Andrews Heating Company  
Minneapolis, Minn.

**Fire-pot**—A large deep round fire-box. No dead ash corners. Room for abundance of fuel to carry many hours without attention.

**High Heating Efficiency**—Steel is thinner than cast iron. This brings the water closer to the fire, heating it quickly and producing a rapid circulation thru the radiators.

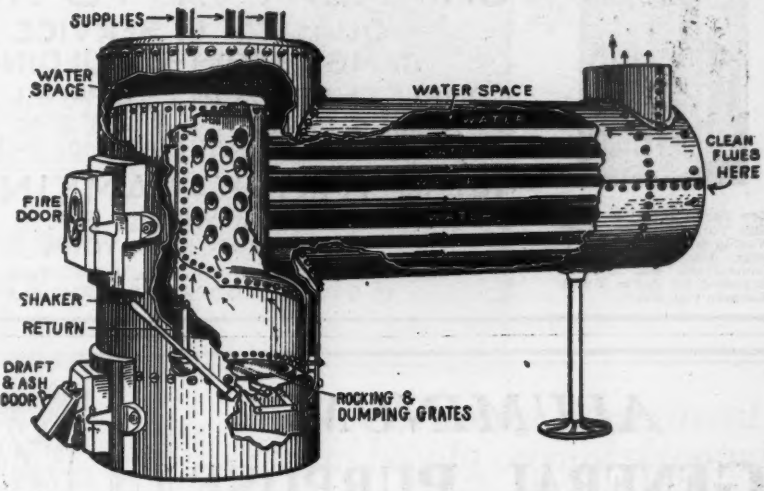
**Big Combustion Chamber**—The large roomy combustion chamber above the fire-box gives the gases lots of room in which to mix and burn, insuring complete combustion.

**Ease of Cleaning the Boiler**—Only one place to clean and only one door to open. Result—No excuse for a dirty boiler.

**Fuel**—The boiler and grate are adapted to burn any kind of fuel—hard, soft, splint and lignite coals and coke as well as oil and gas.

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Ask for this Free Catalog. Send in Plans or Sketch of House for Free Estimate of Cost on any of these Plants.



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Please send catalog and Agents Offer.

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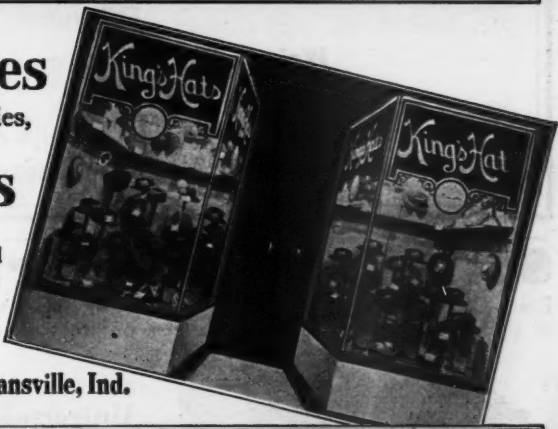
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☐ Standard bowstring steel roof trusses.  
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Kalmeln Co., Inc.

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SIZES IN WIDTH 2'-6", 2'-8", 2'-10", 3'-0"  
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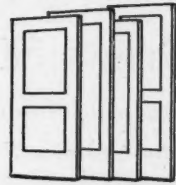
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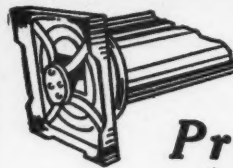
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Round and  
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## ZIMMERMAN

(Patent Iron Base)

**Prevents rotting  
of wood columns**

The Zimmerman is the only base having center bearings. Lifts the column from 1 1/4 to 6 inches off the floor, allowing the air to circulate between the column and the floor. Water runs off without wetting the bottom of column. Specify this base by name.

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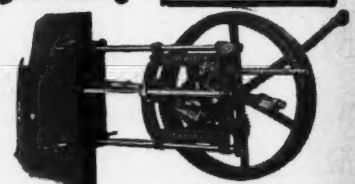
**500%!**

One man and the Champion Mortiser can easily cut as many or more mortises in an hour as six men with brace and chisel. That's a saving of 500% in labor costs or \$5 at \$1 an hour per man. However, the Champion does not require skilled labor to operate, meaning a further saving to you! Every mortise is perfect with straight sides, smooth bottom and ends. No danger of spoiling wood with the Champion whether wood is hard or soft. Quickly adjusted for length, width and depth. Weighs but 25 lbs. Carried anywhere. Sold on money-back guarantee. Try it on our 15-day trial offer. Send for literature now and save money as hundreds of contractors are doing!

**The CHAMPION  
MORTISER**

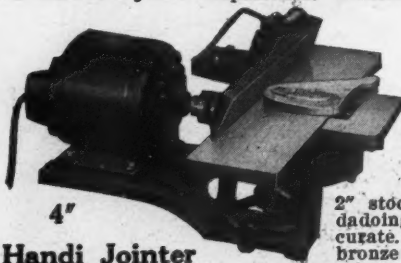


Colgan Machinery & Supply Co.  
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## Still Greater Bargains in Boice Machines

Boice-Crane, the world's largest builders of small bench machines, now offers you the very greatest bargains in their 14 years' experience. Fifteen different Boice-Crane Machines. Unsurpassed quality and capacity.



**Handi Jointer**

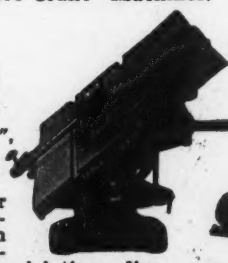
Tables 20" ground and polished. Planes 3/4" x 4". Fence tilts 45 deg. both ways. Improved rabbit arm. Bronze bearings. Safety guard, \$3. **\$25**

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Table 15" x 17", tilts 45 degrees. 8" saw cuts

2" stock. Elevates for dadoing. Always accurate. Pulley between bronze bearings. Attachments for dadoing, jointing, disc and drum sanding, boring, thickness planing, grinding. Wgt. 60 lbs. **\$30**

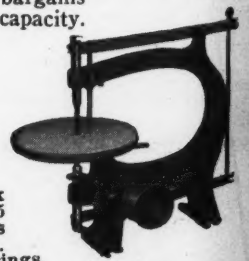
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Send for Boice-Crane's free new 1929 catalog of 60 pages. Investigate Boice-Crane bargains in machines before you buy.



**12"  
Band  
Saw**

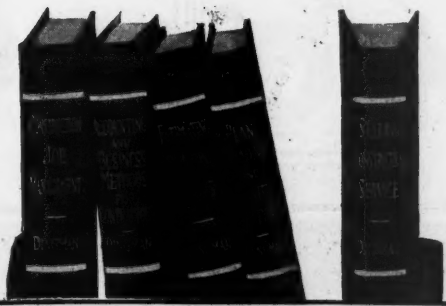
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our famous 14" band saw. Guards, \$8. Sturdy construction. (Without motor or guards) **\$35**



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and Owner. R. T. McCartney—Architect.  
Royal Blends—Ochre Joint,  
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*Use this face brick for permanent,  
colorful beauty, prompt shipping  
service—mixed carloads at no extra cost*

**F**ORESTBLEND Face Brick lends distinction to any building. It's patented texture and wide range of permanent colors makes any building easier to sell or rent. The fire safety of face brick construction, its low up-keep, slow depreciation and permanent color need not be recalled to the experienced contractor. Finzer Brothers Clay Company cooperate to the fullest extent with builders to enable them to increase their profits. Prompt shipments are made and Finzer dealers receive mixed carloads without extra charge. (A service which is passed on to the contractor.) Naturally more and more Forestblend face brick finds its way into buildings.

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**FINZER FACE BRICK**

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Yours very truly,

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Every National has a Special Motor for  
Vacuum Dust Collector

THE NATIONAL  
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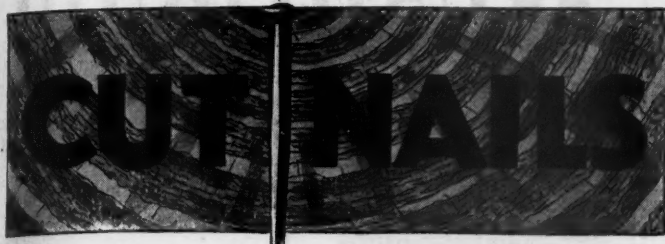
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A Convenient Payment Plan  
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There are four good reasons why Reading Cut Nails stay tight, year after year. These reasons are the four sides—the four gripping surfaces—that give Reading Cut Nails 72% more holding power than wire nails! Because Reading Cut Nails remain firm until the wood itself decays—because it takes fewer of them to do a good job—because for generations they have been the standard where great durability and holding power are required—you will find that they attract the quality trade wherever they are sold. They make staunch friends with your customers, bringing in a steady volume of profit to you.

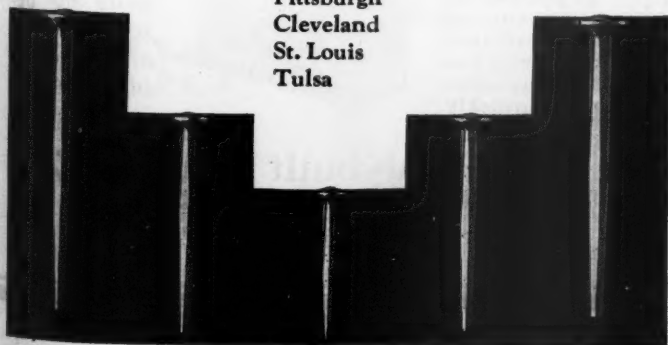
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TRADE MARK



### Window Screens Modernized

*A*LL types of window construction are suitable for Rolscreen installation. All styles of window trim which present different problems of installation have been fully solved.

All plaster or stone jambs—solid wood or semi wood and plaster return and the "forty and one" other conditions may be screened with ease and satisfaction.

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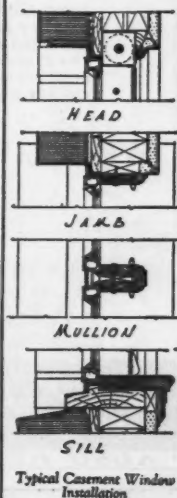
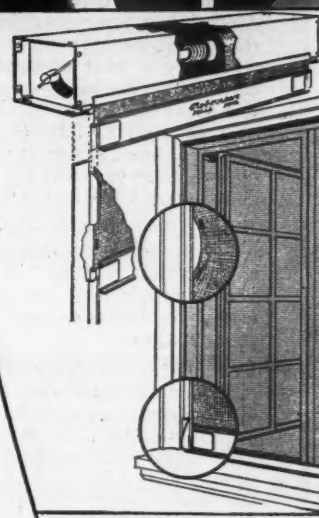
The Rolscreens are substantial in construction, all metal, economical in installation and service, fireproof—no question of sagging, bagging, warping or decaying.

Send for Instruction Sheet and Rolscreen Illustrated Booklet



*A section through guide showing lug in selvage of screen wire which prevents screen from sagging. A "non-sagging" feature found only in Rolscreens.*

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Typical Casement Window Installation







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A great deal of the winter your roof lies under a blanket of snow. In spring the snow melts. Then comes driving rain—intense heat. You can't bring your roof inside to protect it from this weather. It must withstand the cold of winter—the heat of summer. Ordinary roofing cannot do this long—that's why so many people use Leadclad. Leadclad gives you the protection of PURE LEAD, long known to be the best roofing material available. Leadclad is copper bearing steel on which is fused a heavy coating of PURE LEAD.

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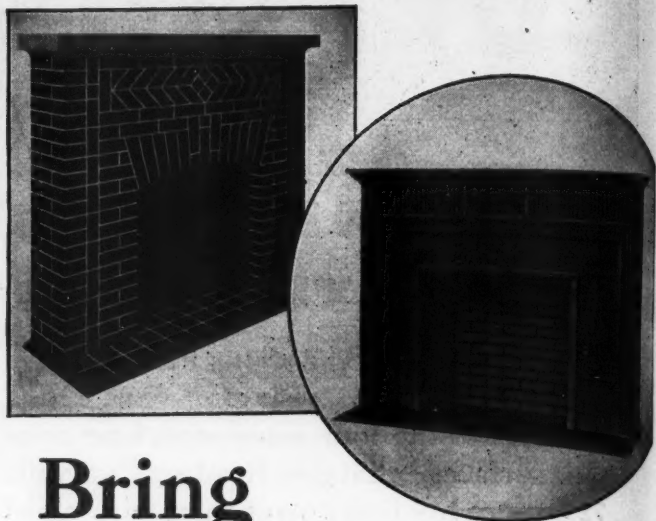
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Readybuilts can be installed in one hour in any home, under construction or completed. They are economical in price, and come in many styles and colors, in period or modern designs. Shipped anywhere ready to install.

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write for descriptive literature and full information.

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# Fiat

### Shower Bath Compartment

Made of steel-Vitreous Enamel or Duco Finish in colors. Four models—fourteen sizes, from 30x30 in. Terrazzo Receptors. Doors or curtains optional. The popular bath made practical.

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# Saves Space

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# \$35

F. O. B. Pittsburgh, Pa. (Shipping weight 125 lbs.) FULLY GUARANTEED

Attractive proposition for specialty men—write



No weights, springs or pulleys

Stair slides up and down through rollers mounted on door and is easily operated.

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An Investment Not an Expense

The quickest and strongest clamps made. That's why they're the standard in U. S. Government Works and in such concerns as General Electric Co., Dodge Bros. Motor Co., Victor Talking Machine Co., etc.

We can PROVE it in your own shop. Write today.

**James L. Taylor Mfg. Co.**  
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**MAIL COUPON**

**CRESCENT Universal Wood Worker**

BRINGS you greatly increased efficiency at very moderate cost. The Crescent Universal Wood Worker is a thoroughly practical, substantial machine. It is very convenient to operate. The machine is adapted for turning out a wide variety of work quickly and accurately. It consists of band saw, jointer, saw table with tilting top, reversible single-spindle shaper, borer, all on one substantial base. All five units may be used at one time or separately. With attachments it efficiently does sanding, panel raising, resawing, mortising, grinding knives and tenoning. Quality built in every particular. Put this machine on the job right now, at the beginning of the season, and give it a chance to help you make big money in 1929. If not perfectly satisfied, you can return it and get money back. Write today.

**We Build:**

- Band Saws
- Saw Tables
- Self Feed Rip Saw
- Shapers—Jointers
- Variety Woodworkers
- Planers
- Planers and Matchers
- Disk Grinders
- Cut-off Table

- Swing Saws
- Borers—Tenoners
- Hollow Chisel Mortisers
- Universal Cut-off Saw

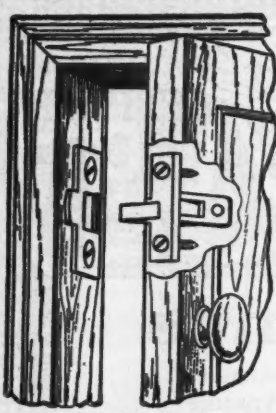
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THE CRESCENT MACHINE CO., 224 Main St., Leestonia, Ohio

Send booklet showing the many uses of the Crescent Universal Wood Worker

Name \_\_\_\_\_ Street \_\_\_\_\_ Town and State \_\_\_\_\_ Business \_\_\_\_\_





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*Three-Point Lock for Single Door or Casement*  
*Five-Point Lock for Double Doors or Casements*  
*Handle Lock or Pushlock for Standing Leaf of Double Doors or Casements*

**SECRET LATCH**  
**FRICTION CATCH**

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SAMPLES DISPLAYED WITH ARCHITECTS' SPECIFICATIONS NEW YORK, N.Y.

Hagstrom Mfg. Co., Glen Cove, N. Y.



Friction Catch Secret Latch



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Framed in the darkness of the night, floodlighted homes stand out more prominently and attractively than in the daytime.

If interested in using floodlighting to help sell homes or to help familiarize the public with the location of a new apartment house or other buildings, write Pittsburgh Reflector Company, 304 Ross Street, Pittsburgh, Pa.

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The Silvered Reflectors with the Permanent Reflecting Surface

## A Purse at Your Feet



If a pocketbook lay at your feet you'd pick it up, wouldn't you? We lay a proposition before you that has more money in it than any purse you are likely to find. Be an agent for Federal Metal Weather Strip. It is easy to sell because it is economical and 100% effective. Each customer's satisfaction spreads to his neighbors. Pick up this pocketbook by writing us today.

*We tell you how others have doubled weekly income*

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*ready to lay*  
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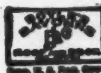
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Waterproof  
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Lays flat  
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Ready to lay—Requires no white lead bedding; will not buckle, crack or peel.

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Make Your Own Mouldings, Beading, Matchings, etc., with the

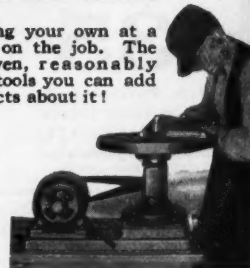
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SAVE money on millwork by making your own at a fraction of the usual cost—right on the job. The H & A Shaper is portable, motor-driven, reasonably priced. One of the most profitable tools you can add to your shop equipment. Get the facts about it!

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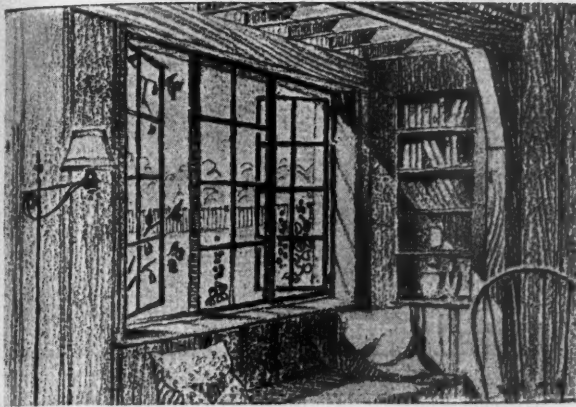
Band Saws  
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Scroll Saws  
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**HESTON & ANDERSON**  
 204 Market St., FAIRFIELD, IOWA

For Modern Homes



TRUSCON  
Standard  
CASEMENTS

MODEL No 5

In single and combination  
units. Factory assembled

TRUSCON STEEL COMPANY  
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*Warehouses and Offices in all Principal Cities*

FREE-O-DUST

THE ONE SURFACER THAT MAKES FLOORS PERFECT

New Exclusive Construction Features

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FLOOR SURFACING

The new Improved Free-O-Dust is the result of 25 years' experience in the manufacture of floor machinery. Correct speed, balance and weight result in greater production in square feet per hour and smoother vibrationless surfacing.

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The Free-O-Dust has sufficient weight to "hug" the floor, yet may be carried by one man.

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Please send free booklet and complete information on  
your new Improved FREE-O-DUST SUPER SURFACER.

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Address.....  
City.....State.....

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for More  
PROFIT  
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ALLMETAL



ALLMETAL is the logical  
weatherstrip for you to use to  
increase your profits.

It is cut to size ready to install  
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Why not start NOW to increase  
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WE LOAN NECESSARY TOOLS

ALLMETAL WEATHERSTRIP CO.  
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GENTLEMEN: SEND LITERATURE AND SAMPLES

NAME

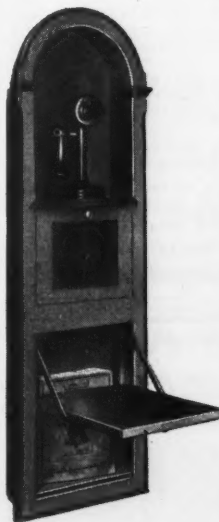
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New, attractive, practical—this  
Kitchen Maid Telephone Niche is  
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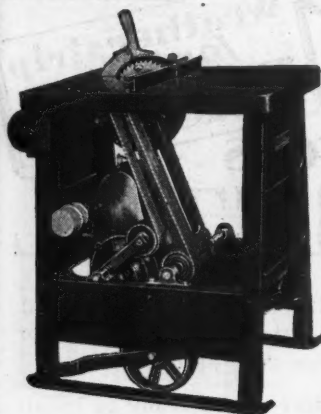
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When You Take A Power Saw Out On Every Job  
The Saving You Make With Its Use Is A Real Profit

Here is a Powerful, Portable, Carpenter, Sawing Machine not dependent on electric service or skill of the operator. Will cut rafters, studs, stairhorses and bridging; square long dimensions as fast as you can handle the lumber. For trimming sash, doors, screens, fitting casing and flooring. Will do those smooth, accurate jobs with 50% of the cost of hand fitting.

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Furnished with either gasoline or electric power, or both. Gasoline equipment weighs 300 pounds and is positively without vibration. Runs all day long on a couple of gallons of gas and a little oil. Will saw as much lumber as a crew with hand saws. Build 1929 buildings 1929 way.

If you will write, we will make you a trial offer that will interest you. Delivery from stock or warehouse near you.

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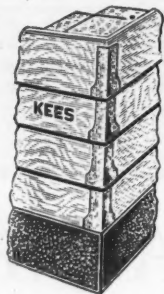
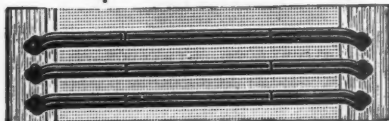


## ... Another name for Quality

... a name that has traveled down the years, gaining fame as a Hardware Specialties name ... specialties of worth. The items shown below are two of the many Kees high-grade, builders' specialties:

### Drop Siding Metal Corners

A long-life, waterproof, metal building corner ... gives butt-mitred joint effect ... chemically treated to take paint—no "sizing" necessary. Practically invisible and will last as long as the building. Saves money and time on any siding job.



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... A practical necessity in any home. Prevents screen from bulging or breaking. Reinforces door frame. Comes in one size which fits most all doors, telescoping from 24 to 32 inches. Available in many different finishes.

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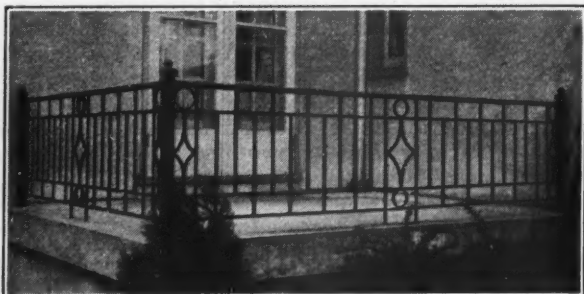
Box 93

Beatrice, Nebraska

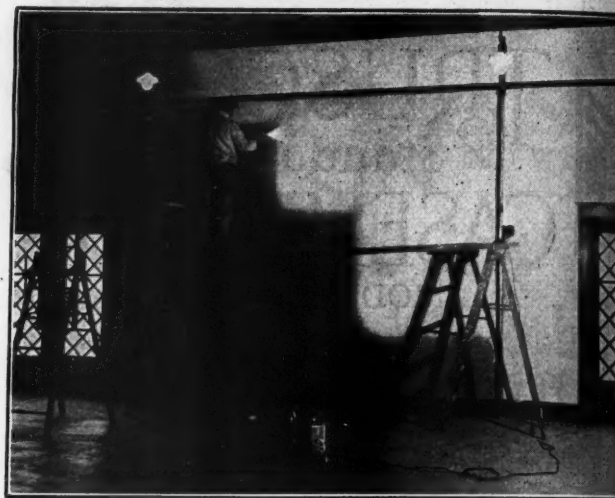
## IRON RAILINGS FOR EVERY PURPOSE

Plain and ornamental iron fence—entrance gates, wire and iron window guards, balcony railings, grilles, folding gates, gratings, cellar doors, etc.

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A few months ago a new light weight low pressure Air Painter was announced in these columns. We said that it was "just what the doctor ordered" for you men who build homes and other structures. And subsequent results have proved that we were right. The Spray Master has "gone over big"—it is making good on every claim made for it—it will make good for you. The

## Spray Master

is winning because it insures jobs being finished on time—no hold-ups due to lack of help, etc. This means economy. Every Gast Air Painter—gas engine or motor driven—secures perfect atomization of paints, lacquers, enamels, etc. They are the only spray-painters using the rotary air compressor principle which insures against a "let-down" of air supply or jerky paint pressure. For a perfect in or outside paint job, Gast Air Painters are in a class alone. They come complete with perfect working two-finger gun, pressure tank, etc. And the price is low for the dependable and efficient service received.

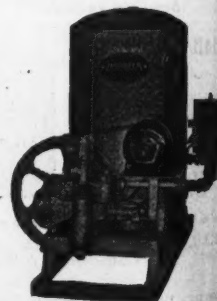
Drop us a line today—it will pay you well

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"LOWEST PRESSURE—HIGHEST QUALITY"

## HOOSIER WATER SERVICE!

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### Metal Weatherstrips and Screens

OUR representatives make big money the year 'round—no slack period. We back you with complete sales and advertising help. Ceco quality and reputation gives you advantage on all jobs. Before you make an connection—and even if you are now connected—be sure to get our attractive income-producing proposition. This offer includes full or part time men for year 'round work. Write today for the complete facts.

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Division of  
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There is something new in craftsmen's fine tools. It is this RAPID RULE—a good rule that works both ways. Measure vertical or horizontal surfaces. *It is rigid.* Measure around corners or circumferences. *It is flexible.*

Coiled in a neat, nickel-plated cup—a dignified companion for your watch, this six-foot measuring instrument is instantly ready to spring forth to serve you—to do for you all things which you have heretofore demanded of both wooden rule and steel tape. It possesses great speed and is unusually accurate. Six feet of the world's best steel, nicked, highly polished, and the figures easily read in dim corners.

*A Modern Tool for Modern Craftsmen*

Rules Now Made in the Following Scales:  
72 inch with 1/16 inch graduations  
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Price \$5. Ask Your Dealer or Write  
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Sands, Waxes, Scrubs, Polishes old and new floors. It is the simplest, most practical electrically operated floor machine for home, office, store, church, school, hospital, show room, garage or factory. A demonstration will convince you. The low price and easy terms will interest you.

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Thousands of Contractors and Builders Use the America's Foremost Universal Instrument

**G & B Model 45**  
Price \$50.00  
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The Instrument without regrets  
**YOU TAKE NO RISK**

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It is a fully equipped and guaranteed Convertible **Y** Level Shipped on Trial at once





**Price Includes**  
1/8 H. P.  
A. C.  
Motor

**18 Tools In One**

**\$35**  
F. O. B. CHICAGO

**Belt Tightener**

THE S & B 8-in. COMBINATION SAW (18 tools in one) is the ideal machine for the shop, factory or the home: will rip, cross cut, bevel, miter, mortise, groove, drill, tenon, grind, rabbet, buff and polish. Motor is mounted on a base that is a part of the machine proper. Run from any light socket also provides for other purposes when the saw is not in use. Complete with attachments and price includes 1/8 H. P. Motor, 60-Cycle, 110-Volt A. C. Price \$35.00 F. O. B. Chicago. Shipping weight 100 lbs. (Planer attachment to fit on table top will smooth pieces up to 2 inches wide, \$3 extra.)

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**Sent to You on 15 Days Approval**

**MONEY BACK GUARANTEE**

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\$5.00 Book of Blue Prints Showing 46 PRIZE PROJECTS with Purchase

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F. O. B. CHICAGO

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**\$35. F. O. B. Chicago**

**12" Band Saw**

Positively a sensation and at this LOW PRICE you can NOW do the 1001 things you wanted quickly and easy. This 12" BAND SAW has a tilting table and sturdily built. Ideal for the shop or home. Motor \$15 extra.



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**WRIGHT RUBBER TILE**  
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There are more possibilities than you know, for profit with Wright Rubber Tile in your community. Send for a copy of this book. It tells you how to make real profits with this modern flooring. It has helped many men into a paying business of their own. Write for your copy today.


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## Vertically Drawn Flat Glass

A CLEAR,  
BRILLIANT GLASS  
MADE PERFECTLY FLAT,  
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ACCORDING TO  
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STANDARDS

A brand you



can depend upon.

**ADAMSTON FLAT GLASS COMPANY**  
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The "Universal" is an Accurate Steel Tape at a popular price. Line is 3/8" wide, standard weight. Case is sturdy, and of good appearance.

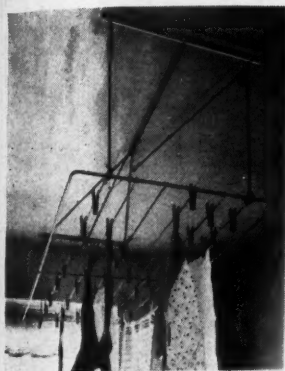


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Our Folding Aluminum Rules are furnished with or without hook. All joints and fittings are solid brass, making the rule rust-proof throughout.

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New York - Windsor, Ont.



Style 008

An all metal dryer,  $\frac{1}{2}$  in. steel; white enameled outside frame; 6 galvanized wire lines with supporting cross-piece and 48 spring clothes-pins. Dimension, 24 in. x 55 in.

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### ROYAL INDOOR CLOTHES DRYERS

Here is an innovation which the average home buyer and apartment seeker will be quick to appreciate. Does away with the old-fashioned clothes lines. Can be used rain or shine.

Shipped in individual cartons ready for easy hanging.

Write us immediately for literature and special quantity prices.

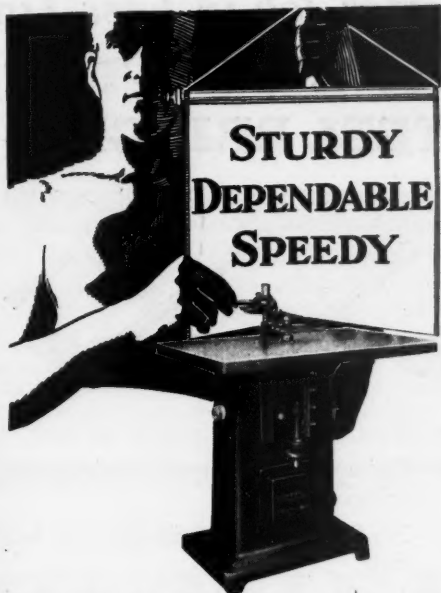
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206 STRAIGHT AVE. GRAND RAPIDS, MICH



### "EBCO" Kitchen Sink "pride of the home"

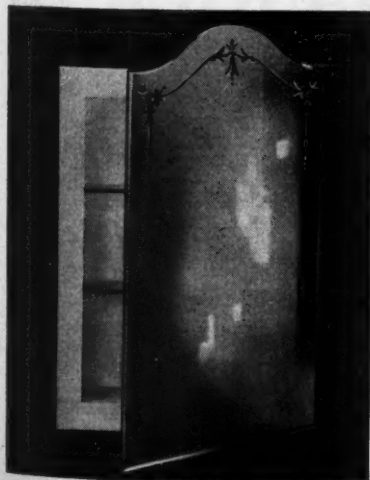
Combines beauty and greater utility. The "EBCO" is the sensation of exhibition homes everywhere. Beautiful, durable porcelain enameled in one solid piece—washing and drying compartments that are always in readiness—need no storage space—no ridding up. Washing dishes and preparing foodstuffs are easy tasks with the "EBCO."

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Manufacturers also of Ventilated Closets, Urinals, Wash Sinks, Drinking Fountains and Steel Partitions for Toilet Rooms.



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Excel metal cabinets are of the highest quality and are priced within the reach of all. A most complete line of cabinets to select from—32 styles in all, including six styles of venetian vanity type cabinets.

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If you desire the best cabinet that can be obtained at the lowest possible price, write us today for complete information and prices.

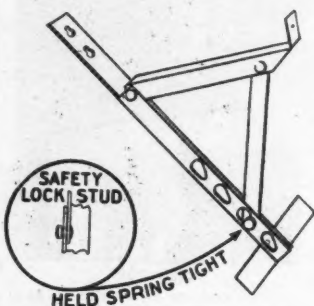
Other products manufactured by the Excel Metal Cabinet Company are metal kitchen cabinets, hospital cabinets, ironing board cabinets, and package receiver cabinets.

**Excel Metal Cabinet Company, Jamestown, New York**

EXCEL METAL CABINET CO.  
Jamestown, New York  
Please send me your free catalog and prices.  
Name..... Address..... Town..... State.....



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"EVER-READY" Roofing Brackets speed up your jobs. They are set in place and moved quickly as the job progresses. The ease of handling, strength, simplicity and safety of "Ever-Ready" Brackets make them the choice of Contractors and Roofers who demand satisfactory equipment.

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## What Could Be Better?



**NO FLAME  
NO SOOT  
NO SMOKE  
NO DANGER  
NO WASTE  
NO WORRY**

and  
**AUTOMATIC OPERATION**

All of these advantages combined with low maintenance cost make the

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**FLAMELESS WATER HEATER**  
preferred the world over. Testimonials prove this. Over 35,000 installed!

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**SEPCO**

is the only Electric Water Heater that avoids waste of Hot Water when user **FORGETS** to close the faucet tightly.

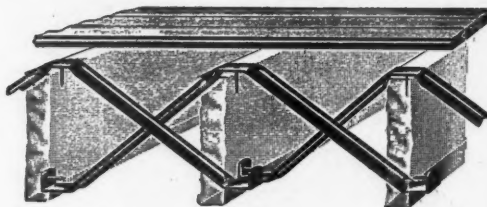
**CONTRACTORS**

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**Stronger**—Ties 3 joists together in one unit.

**Cheaper**—1 piece "3-TY" equals 2 pieces wooden bridging.

**Easier**—No fitting; can be installed in half the time.

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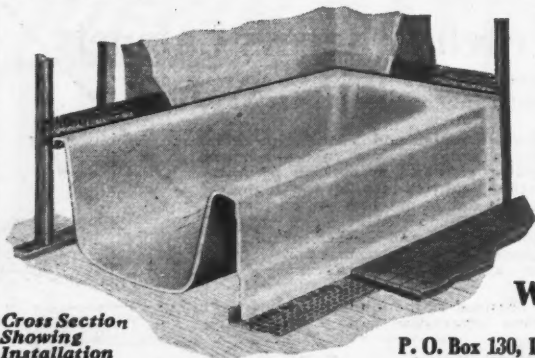
**\$10.00 per 100 pieces.**

Write for our proposition.

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WEST POUGHKEEPSIE NEW YORK

Also Door Hangers and Track, Automatic Lock Tackle Blocks

## LUCKE LEAK PROOF TUB HANGER



Guaranteed to:

1. Prevent Tub From Settling.
2. Prevent Tub From Leaking.
3. Prevent Ruined Ceilings.
4. Eliminate Redecorating Bills.
5. Eliminate Replastering Around Tub.

Easy to Install — Economical — Practical

**WILLIAM B. LUCKE**  
Manufacturer

P. O. Box 130, Dept. "B", Wilmette, Ill.

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Please send me complete information on your  
**LEAK PROOF BATH TUB HANGERS.**  
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Address.....  
Town.....  
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**"My Parks turns out more than I ever expected!"**



When you buy a Parks you are getting *proved performance* and *long life*. Parks machines do *more* than is claimed for them according to the testimony of experienced men—men who know. The "Pride of the Shop," which Mr. Jensen owns is shown above. It can do almost anything in machine work including self-feed planing. Its price is only \$440, easily paid back the first year in the extra work it handles.

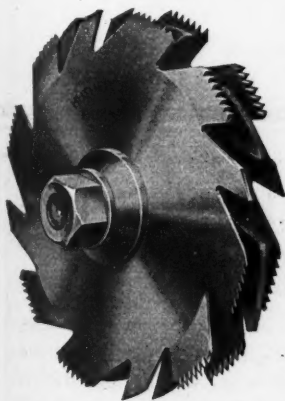
*Doesn't this Parks fit your shop and your job right to the dot? Get your Parks! Write for catalog.*

"My 'Pride of the Shop' arrived in due season" writes J. K. Jensen of Santa Fe, N. Mex., "in fact about two weeks earlier than expected. It is a great help in my shop and does good work, and more than I ever expected it would be able to turn out. My foreman says: 'It sure is a peach!' All told I am very pleased with the machine, and I appreciate the promptness with which it was delivered here."

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Every Parks is guaranteed 10 years

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Builders of quality woodworking machinery since 1887  
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**HUTHER**  
Dado head



Developed from our own patents, this adjustable groover cuts either with or across the grain. Cutters may be used singly, in pairs or in any combination necessary for desired cut.

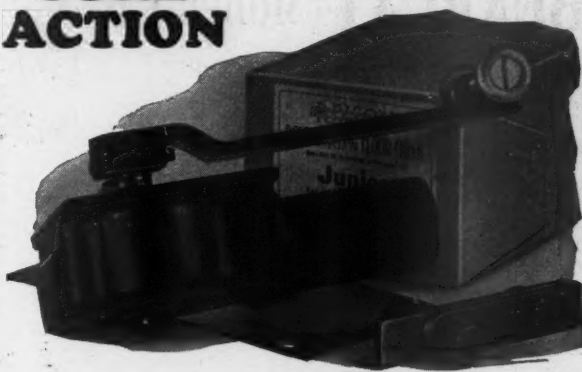
Send for one on approval. It may be returned at our expense if unsatisfactory.

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Makers of Better Saws for More than Fifty Years

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**Junior Double Acting Floor Check**

The kind of hardware that suggests satisfaction the moment it comes out of the box. Contractors say, "There's a dependable Check. They always like it." Closes light interior doors positively, gently and silently.

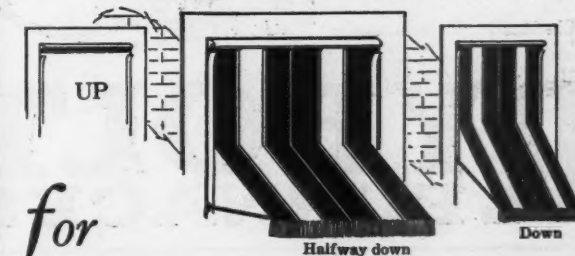
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MAKES ANY BUILDING MORE ATTRACTIVE

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*A Super-Saw for the Larger Jobs*

Lots of POWER—5 to 10 H. P.

Plenty of CAPACITY—Cuts 6 in. Stock

ELECTRIC MOTOR or GASOLINE ENGINE

*A Money Maker for the Contractor*

*Ideal for Lumber Yard Service*

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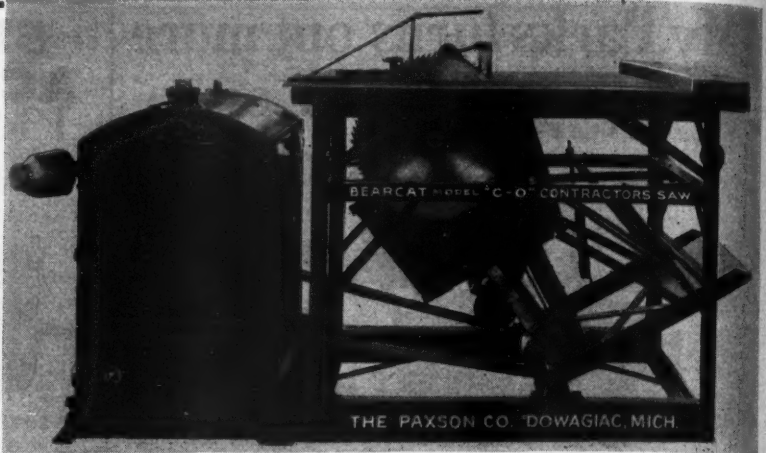
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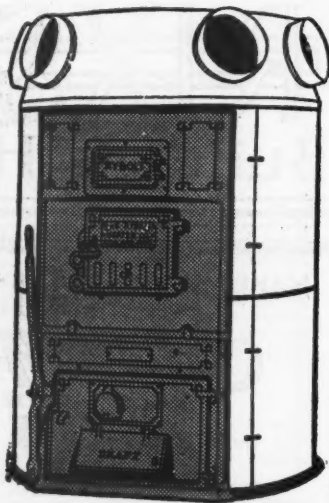
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*Must Be Handled To Be Appreciated.  
Have Your Dealer Demonstrate It To You.*

NORTH BROS. MFG. CO., PHILA., PA.

# CLASSIFIED DIRECTORY AND BUYERS' GUIDE

**Listing Reliable, Responsible Manufacturers of All Kinds of  
Materials, Equipment, Machinery, Fixtures, Home Con-  
veniences and Furnishings, Hardware, Tools, Etc.,  
Used in the Building and Related Fields**

***And the Page Numbers on Which Their Advertisements Appear***

**T**HIS Classified Index and Buyers Guide' is arranged from A to Z according to NOUN names; that is, all kinds of Roofing are in one section in the proper alphabetical place. In the section devoted to Doors you will find lists of over thirty different kinds. Do not look for Screen Doors, but for *Doors—Screen*; if you want to find metal lath, look for *Lath—Metal*, etc.

Under each classification the names of manufacturers appear alphabetically, followed by page number on which their advertisement appears in this issue of the **AMERICAN BUILDER**.

The manufacturers listed below will be pleased to furnish complete information on any product that appears in connection with their names, although they may not be advertising those particular products in this April number. Do not hesitate to write them to forward catalogues, prices and the names and locations of their nearest dealers.

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International Steel & Iron Co.	240
Geo. L. Mesker & Co.	243
Milwaukee Corrugating Co.	302
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248
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Genfire Steel Co.	52
International Steel & Iron Co.	240
Kalman Steel Co.	28
Macomber Steel Co.	236
Milwaukee Corrugating Co.	302
Truscon Steel Co.	44-251-297

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Beckman-Dawson Roofing Co.	46
Hardin-Lavin Co.	288
Johns-Manville, Inc.	105
B. Karol & Sons Co.	297
Malleable Asphalt Co.	29
The Ruberoid Co.	157
Stanley Plumbing & Supply Co.	295
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Asphalt Products Co., Inc.	221
Beckman-Dawson Roofing Co.	46
Johns-Manville, Inc.	105
Malleable Asphalt Co.	29
The Ruberoid Co.	157
Safepack Mills.	101
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Barber Asphalt Co.	107
Hardin-Lavin Co.	288
Johns-Manville, Inc.	105
B. Karol & Sons Co.	297
Malleable Asphalt Co.	29
Stanley Plumbing & Supply Co.	295
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Louisville Cement Co.	228
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Asbestos Shingle, Slate & Sheathing Co.	22
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Asphalt Products Co., Inc.	221
Beckman-Dawson Roofing Co.	46
Clinton Metallic Paint Co.	289
Edwards Mfg. Co.	291
Johns-Manville Inc.	105
Malleable Asphalt Co.	29
Milwaukee Corrugating Co.	302
The Ruberoid Co.	157
Safepack Mills.	101
Sherwin-Williams Co.	23
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P. & F. Corbin.	155
Knappe & Vogt.	225
Sargent & Co.	20
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Chain Products Co.	295
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American Chain Co., Inc.	33
Chain Products Co.	295
P. & F. Corbin.	155
Knappe & Vogt.	225
Smith & Egge Mfg. Co.	225

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American Chain Co., Inc.	33
P. & F. Corbin.	155
Knappe & Vogt.	225
Sargent & Co.	20
Smith & Egge Mfg. Co.	20
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Genfire Steel Co.	52
International Steel & Iron Co.	240
Kalman Steel Co.	28
Macomber Steel Co.	236
Milwaukee Corrugating Co.	302
Truscon Steel Co.	44-251-297
Wheeling Corrugating Co.	26
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Consolidated Expanded Metal Co.	30
International Steel & Iron Co.	240
Kalman Steel Co.	28
The Macomber Steel Co.	236
Milwaukee Corrugating Co.	302
North Western Expanded Metal Co.	236
Truscon Steel Co.	44-251-297
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Richards-Wilcox Mfg. Co.	6-7
Sargent & Co.	20
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Oscar C. Rixson Co.	237
Richards-Wilcox Mfg. Co.	6-7
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The Stanley Works.	38
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The Crescent Machine Co.	240-291
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Jones Superior Machine Co.	235
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Cincinnati Iron Fence Co.	252
The Donley Bros. Co.	121
Edwards Mfg. Co.	291
Everhot Mfg. Co.	238-290
Holland Furnace Co.	128
Ideal Steel Products Co.	219
International Steel & Iron Co.	240
Kewance Mfg. Co.	232
Lansing Co.	232
Geo. L. Mesker & Co.	243
Peerless Mfg. Co.	225
Vento Steel Sash Co.	225
The Willis Mfg. Co.	236
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Leach Company.	190
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Jas. L. Taylor Mfg. Co.	340
<b>CLAMPS-DOOR</b>	
Sargent & Co.	20
Jas. L. Taylor Mfg. Co.	340
<b>CLAMPS-FURNITURE MAKING</b>	
Richards-Wilcox Mfg. Co.	6-7
Sargent & Co.	20
Jas. L. Taylor Mfg. Co.	340
<b>CLAMPS-HAND</b>	
Knappe & Vogt.	225
<b>CLAMPS-MITER</b>	
A. S. Aloe Co.	216
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General Electric Co.	130
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Consolidated Expanded Metal	30
Donley Bros. Co.	121
Kalman Steel Co.	28
Milwaukee Corrugating Co.	302
Richards-Wilcox Mfg. Co.	6-7
<b>CLIPS—FLOOR</b>	
Consolidated Expanded Metal	30
Kalman Steel Co.	28
Lloyd Floor & Wall Tile Co.	289
Milwaukee Corrugating Co.	302
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Milwaukee Corrugating Co.	302
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F. D. Kees Mfg. Co.	252
Truscon Steel Co.	44-251-297
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Structural Slate Co.	218
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Hess Warming & Vent. Co.	293
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Richards-Wilcox Mfg. Co.	6-7
Sargent & Co.	20
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G. I. Sellers & Sons Co.	137
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Hardin-Lavin Co.	288
Stanley Plumbing & Supply Co.	295
<b>CLOSETS—HANGING</b>	
The Curtis Co.	185
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D. A. Ebinger Sanitary Mfg. Co.	255
Hardin-Lavin Co.	288
B. Karol & Sons Co.	297
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	295
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A. S. Aloe Co.	216
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Gilbert & Bennett Mfg. Co.	43
The Higgin Mfg. Co.	206
Reynolds Wire Co.	103
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Asphalt Products Co., Inc.	221
Beckman-Dawson Roofing Co.	46
Lloyd Floor & Wall Tile Co.	289
Malleable Asphalt Co.	29
Truscon Steel Co.	44-251-293
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The Barber-Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Johns-Manville, Inc.	105
Malleable Asphalt Co.	29
The Ruberoid Co.	157
Safepack Mills	101
The Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
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<b>COLORS—CEMENT</b>	
Samuel Cabot, Inc.	218
Clinton Metallic Paint Co.	289
Concrete Equipment Co.	287
Genfire Steel Co.	52
The Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
C. K. Williams & Co.	292
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International Steel & Iron Co.....	240
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Ralph M. Kennedy.....	290
Porter-Cable Machine Co.....	296
J. D. Wallace & Co.....	185
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Black & Decker Mfg. Co.....	192
Electric Rotary Machine Co.....	251
Hild Floor Machine Co.....	253
Porter-Cable Machine Co.....	296
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Consolidated Expanded Metal Co.....	30
P. & F. Corbin.....	155
Garden City Plating & Mfg. Co.....	292
International Steel & Iron Co.....	240
F. D. Kees Mfg. Co.....	252
Geo. L. Mesker & Co.....	243
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Cincinnati Iron Fence Co.....	252
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Cincinnati Iron Fence Co.....	252
Consolidated Expanded Metal Co.....	30
Crescent Machine Co.....	249-291
Jones Superior Machine Co.....	293
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American Sawmill Machy. Co.....	176-177
Cincinnati Iron Fence Co.....	252
Consolidated Expanded Metal Co.....	30
Crescent Machine Co.....	249-291
Crowe Mfg. Co.....	237
Heston & Anderson.....	250
Hutchinson Mfg. Co.....	229
Huther Bros. Saw Mfg. Co.....	257
Jones Superior Machine Co.....	293
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Cincinnati Iron Fence Co.....	252
Consolidated Expanded Metal Co.....	30
The Edwards Mfg. Co.....	291
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The Edwards Mfg. Co.....	291
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Cincinnati Iron Fence Co.....	252
Consolidated Expanded Metal Co.....	30
Donley Bros. Co.....	121
International Steel & Iron Co.....	240
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William Bayley Co.....	171
Cincinnati Iron Fence Co.....	252
Consolidated Expanded Metal Co.....	30
International Steel & Iron Co.....	240
Geo. L. Mesker & Co.....	243
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David Lupton's Sons Co.....	39
Milwaukee Corrugating Co.....	302
Wheeling Corrugating Co.....	26
Wheeling Metal & Mfg. Co.....	248
Willis Mfg. Co.....	236



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Consolidated Expanded Metal Co.	30
Richards-Wilcox Mfg. Co.	6-7
<b>HANGERS—PIPE</b>	
Crane Co.	129
The Edwards Mfg. Co.	291
Garden City Plating & Mfg. Co.	292
Hardin-Lavin Company	288
Hubeny Bros., Inc.	191
B. Karol & Sons Co.	297
Milwaukee Corrugating Co.	302
Standard Sanitary Mfg. Co.	63
Stanley Plumbing & Supply Co.	295
Truscon Steel Co.	44-251-297
Wheeling Metal & Mfg. Co.	248
<b>HANGERS—SCREEN</b>	
Herman Bleck	293
P. & F. Corbin	155
Frantz Mfg. Co.	3
F. D. Kees Mfg. Co.	252
Knappe & Vogt Mfg. Co.	225
National Mfg. Co.	304
The Stanley Works	38
<b>HANGERS—SLIDING PARTITION</b>	
Consolidated Expanded Metal Co.	30
Frantz Mfg. Co.	3
Lanebro Mfg. Co.	256
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
<b>HANGERS—SPRINKLER PIPE</b>	
Truscon Steel Co.	44-251-297
<b>HANGERS—WALL</b>	
American Radiator Co.	14-15
Crane Co.	129
Knappe & Vogt	225
<b>HANGING CLOSETS—See Closets</b>	
<b>HARDWARE—ACCORDION DOOR</b>	
National Mfg. Co.	304
Lanebro Mfg. Co.	256
Richards-Wilcox Mfg. Co.	6-7
<b>HARDWARE—AWNING</b>	
John Boyle & Co., Inc.	250
Sargent & Co.	20
<b>HARDWARE—BARN DOOR</b>	
Frantz Mfg. Co.	3
F. D. Kees Mfg. Co.	252
Lanebro Mfg. Co.	256
F. E. Myers & Bro.	291
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
Sargent & Co.	20
<b>HARDWARE—CABINET</b>	
Bommer Spring Hinge Co.	161
P. & F. Corbin	155
Frantz Mfg. Co.	3
Garden City Plating & Mfg. Co.	292
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
Stanley Works	38
<b>HARDWARE—CABINET DOOR CATCHES</b>	
Hagstrom Mfg. Co.	250
<b>HARDWARE—CASEMENT WINDOW</b>	
American Casement Window Hdw. Co. Inc.	251
The Casement Hardware Co.	227
P. & F. Corbin	155
Detroit Steel Products Co.	140-141
Frantz Mfg. Co.	3
Gendire Steel Co.	52
Hagstrom Mfg. Co.	250
David Lupton's Sons Co.	39
Lyons Mfg. Co.	295
Mallory Mfg. Co.	294
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
Oscar C. Rixson Co.	257
Sargent & Co.	20
The Stanley Works	38
Truscon Steel Co.	44-251-297
<b>HARDWARE—COLONIAL</b>	
Knappe & Vogt	225
P. & F. Corbin	155
Sargent & Co.	20
<b>HARDWARE—DOOR</b>	
Bakelite Corp.	220
Bommer Spring Hinge Co.	161
Chicago Spring Hinge Co.	242
P. & F. Corbin	155
Frantz Mfg. Co.	3
Garden City Plating & Mfg. Co.	292
Hagstrom Mfg. Co.	250
F. D. Kees Mfg. Co.	252
Knappe & Vogt	225
Lanebro Mfg. Co.	256
National Mfg. Co.	304
Overhead Door Corp.	8-9
Richards-Wilcox Mfg. Co.	6-7
Oscar C. Rixson Co.	257
Sargent & Co.	20
Schlage Lock Co.	40
Stanley Works	38
<b>HARDWARE—ELEVATOR DOOR</b>	
P. & F. Corbin	155
Lanebro Mfg. Co.	256
Richards-Wilcox Mfg. Co.	6-7
<b>HARDWARE—FIREDOR</b>	
Chicago Spring Hinge Co.	242
P. & F. Corbin	155
Lanebro Mfg. Co.	256
Richards-Wilcox Mfg. Co.	6-7
Sargent & Co.	20
Willis Mfg. Co.	236
<b>HARDWARE—GARAGE</b>	
P. & F. Corbin	155
Door Operator Co.	295
Frantz Mfg. Co.	3
Lanebro Mfg. Co.	256
F. E. Myers & Bro. Co.	291
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
Oscar C. Rixson Co.	257
The Stanley Works	38
<b>HARDWARE—KITCHEN CABINET</b>	
P. & F. Corbin	155
Frantz Mfg. Co.	3
Garden City Plating & Mfg. Co.	292
Knappe & Vogt Mfg. Co.	225
Sargent & Co.	20
The Stanley Works	38
<b>HARDWARE—LAVATORY</b>	
Bommer Spring Hinge Co.	161
Chicago Spring Hinge Co.	242
P. & F. Corbin	155
Hardin-Lavin Co.	288
Sargent & Co.	20
Standard Sanitary Mfg. Co.	52
<b>HARDWARE—SASH</b>	
American Casement Window Hardware Co., Inc.	251
The Casement Hardware Co.	227
P. & F. Corbin Co.	155
Frantz Mfg. Co.	3
F. D. Kees Mfg. Co.	252
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
Oscar C. Rixson Co.	257
Sargent & Co.	20
The Stanley Works	38
Truscon Steel Co.	44-251-297
<b>HARDWARE—SCREEN DOOR</b>	
Bommer Spring Hinge Co.	161
Chicago Spring Hinge Co.	242
P. & F. Corbin	155
Frantz Mfg. Co.	3
Garden City Plating & Mfg. Co.	292
The Higgin Mfg. Co.	206
F. D. Kees Mfg. Co.	252
Knappe & Vogt Mfg. Co.	225
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
Oscar C. Rixson Co.	257
Sargent & Co.	20
The Stanley Works	38
Truscon Steel Co.	44-251-297
<b>HARDWARE—STORM SASH</b>	
P. & F. Corbin	155
Frantz Mfg. Co.	3
Garden City Plating & Mfg. Co.	292
F. D. Kees Mfg. Co.	252
Knappe & Vogt Mfg. Co.	225
National Mfg. Co.	304
Sargent & Co.	20
The Stanley Works	38
<b>HARDWARE—TRANSOM</b>	
The Casement Hardware Co.	227
P. & F. Corbin	155
Hagstrom Mfg. Co.	250
Knappe & Vogt Mfg. Co.	225
Oscar C. Rixson Co.	257
Sargent & Co.	20
The Stanley Works	38
<b>HATCHETS</b>	
A. S. Aloe Co.	216
<b>HEADS—CUTTER</b>	
A. S. Aloe Co.	216
American Saw Mill Mch. Co.	176-177
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Henry Disston & Sons, Inc.	109
Heston & Anderson	250
Hutchinson Mfg. Co., Inc.	229
Huther Bros. Saw Mfg. Co.	257
Jones Superior Machine Co.	293
Ralph M. Kennedy	290
Safe Tool Mfg. Co.	229
<b>HEADS—DADO</b>	
A. S. Aloe Co.	216
American Saw Mill Mch. Co.	176-177
W. B. & J. E. Boice	244
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Henry Disston & Sons, Inc.	109
Heston & Anderson	250
Hutchinson Mfg. Co., Inc.	229
Huther Bros. Saw Mfg. Co.	257
Jones Superior Machine Co.	293
Ralph M. Kennedy	290
Safe Tool Mfg. Co.	229
<b>HEADS—JOINTER</b>	
A. S. Aloe Co.	216
American Sawmill Mch. Co.	176-177
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Heston & Anderson	250
Hutchinson Mfg. Co., Inc.	229
Jones Superior Machine Co.	293
Ralph M. Kennedy	290
Parks Woodworking Machine Co.	257
Safe Tool Mfg. Co.	229
Whisler Mfg. Co.	296
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A. S. Aloe Co.	216
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Heston & Anderson	250
Jones Superior Machine Co.	293
Ralph M. Kennedy	290
Whisler Mfg. Co.	296
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<b>HEATERS—CABINET</b>	
American Radiator Co.	14-15
Automatic Elec. Heater Co.	256
Hardin-Lavin Co.	288
Stanley Plumbing & Supply Co.	295
Wheeling Corrugating Co.	26
<b>HEATERS—GARAGE</b>	
American Radiator Co.	14-15
Frantz Mfg. Co.	3
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
<b>HEATERS—GAS</b>	
American Radiator Co.	14-15
Gas-O-Gen Corp.	243
Hardin-Lavin Co.	288
Peerless Mfg. Co.	223
Stanley Plumbing & Supply Co.	295
Wheeling Corrugating Co.	26
<b>HEATERS—GREENHOUSE</b>	
American Radiator Co.	14-15
Automatic Elec. Heater Co.	256
<b>HEATERS—ROOM</b>	
American Radiator Co.	14-15
Automatic Elec. Heater Co.	256
Hardin-Lavin Co.	288
Peerless Mfg. Co.	223
Stanley Plumbing & Supply Co.	295
<b>HEATERS—SCHOOLROOM</b>	
American Radiator Co.	14-15
Automatic Elec. Heater Co.	256
The Thatcher Co.	125
<b>HEATERS—TANK</b>	
American Radiator Co.	14-15
American Stove Co.	132
Automatic Elec. Heater Co.	256
Flint & Walling Mfg. Co.	223
Hardin-Lavin Co.	288
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
<b>HEATERS—WATER</b>	
American Radiator Co.	14-15
Andrews Heating Co.	243
Automatic Electric Heater Co.	256
Crane Co.	129
Ft. Wayne Eng. & Mfg. Co.	288
Gas-O-Gen Corp.	243
Hardin-Lavin Co.	288
B. Karol & Sons Co.	297
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
<b>HEATERS—WATER (Automatic)</b>	
American Radiator Co.	14-15
Automatic Electric Heater Co.	256
Crane Co.	129
Gas-O-Gen Corp.	243
Hardin-Lavin Co.	288
B. Karol & Sons Co.	297
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
H. A. Thrush & Co.	230
<b>HEATING PLANTS—HOT WATER</b>	
American Radiator Co.	14-15
Automatic Elec. Heater Co.	256
Crane Co.	129
Gas-O-Gen Corp.	243
Hardin-Lavin Co.	288
B. Karol & Sons Co.	297
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
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American Radiator Co.	14-15
Hardin-Lavin Co.	288
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
<b>HEATING SYSTEMS—PIPELESS</b>	
<b>FURNACE</b>	
Andrews Heating Co.	243
Hardin-Lavin Co.	288
Hess Warming & Vent. Co.	296
B. Karol & Sons Co.	297
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
<b>HEATING PLANTS—STEAM</b>	
American Radiator Co.	14-15
Crane Co.	129
Hardin-Lavin Co.	288
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125
<b>HEATING PLANTS—VAPOR SYSTEM</b>	
American Radiator Co.	14-15
Concrete Equipment Co.	287
Crane Co.	129
Hardin-Lavin Co.	288
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	295
The Thatcher Co.	125



**HEATING PLANTS—WARM AIR  
FURNACE**

Andrews Heating Co.....	243
S. Cheney & Son.....	244
Hardin-Lavin Co.....	288
Hess Warming & Vent. Co.....	289
Holland Furnace Co.....	128
B. Karol & Sons Co.....	297
Stanley Plumbing & Supply Co.....	295
The Thatcher Co.....	239

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P. & F. Corbin.....	155
Frantz Mfg. Co.....	3
Sargent & Co.....	20
The Stanley Works.....	38

**HINGES—BUTT**

American Casement Window Hardware Co., Inc.....	241
Bommer Spring Hinge Co.....	161
Chicago Spring Hinge Co.....	242
P. & F. Corbin.....	155
Frantz Mfg. Co.....	3
Knappe & Vogt Mfg. Co.....	225
National Mfg. Co.....	304
Oscar C. Rixson Co.....	257
Richards-Wilcox Mfg. Co.....	6-7
Sargent & Co.....	20
The Stanley Works.....	38

**HINGES—FLOOR**

Bommer Spring Hinge Co.....	161
Chicago Spring Hinge Co.....	242
P. & F. Corbin.....	155
Frantz Mfg. Co.....	3
National Mfg. Co.....	304
Oscar C. Rixson Co.....	257
Sargent & Co.....	20

**HINGES—GATE**

Bommer Spring Hinge Co.....	161
Chicago Spring Hinge Co.....	242
Cincinnati Iron Fence Co.....	252
P. & F. Corbin.....	155
Frantz Mfg. Co.....	3
National Mfg. Co.....	304
Richards-Wilcox Mfg. Co.....	6-7
Sargent & Co.....	20
The Stanley Works.....	38

**HINGES—PIVOT**

Bommer Spring Hinge Co.....	161
Chicago Spring Hinge Co.....	242
P. & F. Corbin.....	155
Knappe & Vogt Mfg. Co.....	225
Oscar C. Rixson Co.....	257
Sargent & Co.....	20

**HINGES—SCREEN DOOR**

Bommer Spring Hinge Co.....	161
Chicago Spring Hinge Co.....	242
P. & F. Corbin.....	155
Frantz Mfg. Co.....	3
Garden City Plating & Mfg. Co.....	292
The Higgin Mfg. Co.....	292
F. D. Kees Mfg. Co.....	252
Knappe & Vogt Mfg. Co.....	225
National Mfg. Co.....	304
Sargent & Co.....	20
The Stanley Works.....	38

**HINGES—SPRING**

Bommer Spring Hinge Co.....	161
Chicago Spring Hinge Co.....	242
P. & F. Corbin.....	155
Chas. Fischer Spring Co.....	230
Frantz Mfg. Co.....	3
Garden City Plating & Mfg. Co.....	292
F. D. Kees Mfg. Co.....	252
Knappe & Vogt Mfg. Co.....	225
National Mfg. Co.....	304
Sargent & Co.....	20
The Stanley Works.....	38

**HINGES—STRAP**

Frantz Mfg. Co.....	3
Garden City Plating & Mfg. Co.....	292
Knappe & Vogt Mfg. Co.....	225
National Mfg. Co.....	304
Richards-Wilcox Mfg. Co.....	6-7
The Stanley Works.....	38

**HINGES—SURFACE**

P. & F. Corbin.....	155
Frantz Mfg. Co.....	3
Knappe & Vogt Mfg. Co.....	225
National Mfg. Co.....	304
Richards-Wilcox Mfg. Co.....	6-7
The Stanley Works.....	38

**HOISTS—ASH**

International Steel & Iron Co.....	240
Lanebro Mfg. Co.....	256
Richards-Wilcox Mfg. Co.....	6-7
Sedgwick Winch & Machine Works.....	224
Silent Hoist, Winch & Crane Co.....	291
Stimmel Winch & Machine Works.....	292

**HOISTS—BUILDING MATERIAL**

A. S. Aloe Co.....	216
American Cement Machine Co., Inc.....	235
American Sawmill Machinery Co.....	176-177
Chain Belt Co.....	55-185
C. H. & E. Mfg. Co.....	240
Construction Machy. Co.....	27
International Steel & Iron Co.....	240
Jaeger Machine Co.....	31
Lanebro Mfg. Co.....	256
Lansing Co.....	232
O. K. Clutch & Mch. Co.....	233
Sasgen Derrick Co.....	290
Sidney Elevator Mfg. Co.....	296
Stimmel Winch & Machine Works.....	292
Universal Hoist & Mfg. Co.....	294

**HOISTS—CELLAR**

International Steel & Iron Co.....	240
Lanebro Mfg. Co.....	256
Richards-Wilcox Mfg. Co.....	6-7
Sedgwick Machine Works.....	224
Sidney Elevator Mfg. Co.....	296

**HOISTS—CHAIN**

American Chain Co.....	33
International Steel & Iron Co.....	240
Richards-Wilcox Mfg. Co.....	6-7
Scott-Bansbach Mch. Co.....	254

**HOISTS—ELECTRIC**

American Cement Machine Co.....	235
C. H. & E. Mfg. Co.....	240
Construction Machinery Co.....	27
Jaeger Machine Co.....	31
O. K. Clutch & Mch. Co.....	233
Richards-Wilcox Mfg. Co.....	6-7
Sasgen Derrick Co.....	290
Scott-Bansbach Mch. Co.....	254
Sidney Elevator Mfg. Co.....	296
Silent Hoist, Winch & Crane Co.....	291
Stimmel Winch & Machine Works.....	292
Universal Hoist & Mfg. Co.....	294

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Sedgwick Machine Works.....	224
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**HOISTS—GASOLINE**

American Cement Machine Co.....	235
C. H. & E. Mfg. Co.....	240
Fairbanks, Morse & Co.....	124
Construction Machy. Co.....	27
Jaeger Machine Co.....	31
Lansing Co.....	232
O. K. Clutch & Mch. Co.....	233
Sasgen Elevator Mfg. Co.....	290
Sidney Elevator Mfg. Co.....	296
Stimmel Winch & Machine Works.....	292
Universal Hoist & Mfg. Co.....	294

**HOISTS—HAND**

Chain Belt Co.....	55-188
Lanebro Mfg. Co.....	256
Richards-Wilcox Mfg. Co.....	6-7
Sasgen Derrick Co.....	290
Sedgwick Machine Works.....	224
Sidney Elevator Mfg. Co.....	296
Silent Hoist, Winch & Crane Co.....	291
Stimmel Winch & Machine Works.....	292

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International Steel & Iron Co.....	240
Sedgwick Machine Works.....	224
Sidney Elevator Mfg. Co.....	296
Stimmel Winch & Machine Works.....	292

**HOISTS—ROPE**

A. S. Aloe Co.....	216
Lanebro Mfg. Co.....	256
Sedgwick Machine Works.....	224
Sidney Elevator Mfg. Co.....	296
Stimmel Winch & Machine Works.....	292

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Bommer Spring Hinge Co.....	161
P. & F. Corbin.....	155
Door Operators Corp.....	290
Frantz Mfg. Co.....	3
National Mfg. Co.....	304
Richards-Wilcox Mfg. Co.....	6-7
Oscar C. Rixson Co.....	257
Sargent & Co.....	20
Sasgen Derrick Co.....	296
Stanley Works.....	38

**HOLDERS—DOOR CHECK**

Bommer Spring Hinge Co.....	161
P. & F. Corbin.....	155
Door Operators Corp.....	290
Richards-Wilcox Mfg. Co.....	6-7
Oscar C. Rixson Co.....	257
Sargent & Co.....	20

**HOLDERS—GARAGE DOOR**

P. & F. Corbin.....	155
Door Operators Corp.....	290
Frantz Mfg. Co.....	3
National Mfg. Co.....	304
Richards-Wilcox Mfg. Co.....	6-7
Oscar C. Rixson Co.....	257
Sasgen Derrick Co.....	290
The Stanley Works.....	38

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American Casement Window Hardware Co., Inc.....	241
Colgan Mch. Co.....	244
P. & F. Corbin.....	155
Hardware Sales Co.....	294
Hutchinson Mfg. Co.....	229
Safe Tool Mfg. Co.....	239

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Blocks****HOLLOW METAL DOORS—See Doors****HOLLOW MORTISING CHISELS—See  
Chisels****HOLLOW TILE MACHINES—See  
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Chain Products Co.....	295
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P. & F. Corbin.....	155
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Sargent & Co.....	20
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Capstans****HOUSE MOVING JACKS—See Jacks****HOUSE MOVING ROLLERS—See  
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Kerner Incinerator Co.....	127
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American Radiator Co.....	14-15
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Chas. Brunning Co., Inc.....	296
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Warren-Knight Co.....	295
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The Donley Bros. Co.....	121
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Genfire Steel Co.....	52
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Kalman Steel Co.....	28
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Truscon Steel Co.....	44-251-297
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Warren-Knight Co.....	295
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David White Co., Inc.....	230
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Geler & Blum, Inc.....	253
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Boards, Insulating; also paper,  
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S. Cheney & Son.....	244
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Consolidated Expanded Metal.....	30
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The Donley Bros. Co.....	121
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International Steel & Iron Co.....	240
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Kalman Steel Co.....	28
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Kewanee Mfg. Co.....	235
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The Macomber Steel Co.....	236
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Geo. L. Mesker & Co.....	243
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Richards-Wilcox Mfg. Co.....	6-7
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Sargent & Co.....	20
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The Stanley Works.....	38
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**IRONS—BRANDING**

A. S. Aloe Co.....	216
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Everhot Mfg. Co.....	288-294
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**IRONS—PLANE**

Sargent & Co.....	20
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The Stanley Works.....	38
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Milwaukee Corrugating Co.....	302
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Stanley Plumbing & Supply Co.....	295
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<b>IRON GATES—See Gates</b>	
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Kalman Steel Co.....	28
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Heston & Anderson.....	250
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Jones Superior Machine Co.....	293
Ralph M. Kennedy.....	290
Kornau Machine Co.....	287
Master Woodworker Mfg. Co.....	234
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Safe Tool Mfg. Co.....	229
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Henry Diston & Sons.....	109
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Ralph M. Kennedy.....	290
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American Sawmill Mch. Co.....	176-177
Combination Woodworking Machine Co.....	219
The Crescent Machine Co.....	249-291
Henry Diston & Sons, Inc.....	109
Heston & Anderson.....	250
Hutchinson Mfg. Co.....	229
Huther Bros. Saw Mfg. Co.....	257
Jones Superior Machine Co.....	293
Ralph M. Kennedy.....	290
Parks Woodworking Mch. Co.....	257
Safe Tool Mfg. Co.....	227
Wappat Gear Works.....	218
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American Saw Mill Machinery Co.....	176-177
Combination Woodworking Machine Co.....	219
The Crescent Machine Co.....	249-291
Henry Diston & Sons, Inc.....	109
Heston & Anderson.....	250
Hutchinson Mfg. Co., Inc.....	229
Huther Bros. Saw Mfg. Co., Inc.....	257
Jones Superior Machine Co.....	293
Ralph M. Kennedy.....	290
Parks Woodworking Mch. Co.....	257
Safe Tool Mfg. Co.....	229
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American Sawmill Machinery Co.....	176-177
Combination Woodworking Machine Co.....	219
Crescent Machine Co.....	249-291
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Huther Bros. Saw Mfg. Co., Inc.....	257
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Ralph M. Kennedy.....	290
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Genfire Steel Co.....	52
International Steel & Iron Co.....	240
Kalman Steel Co.....	28
Lloyd Floor & Wall Tile Co.....	239
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Milwaukee Corrugating Co.....	302
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Consolidated Expanded Metal Co.....	30
The Edwards Mfg. Co.....	291
Genfire Steel Co.....	52
International Steel & Iron Co.....	240
Kalman Steel Co.....	28
Lloyd Floor & Wall Tile Co.....	239
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Milwaukee Corrugating Co.....	302
North Western Expanded Metal Co.....	300
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Wheeling Corrugating Co.....	26
Wheeling Metal & Mfg. Co.....	248
The Willis Mfg. Co.....	236
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Consolidated Expanded Metal Co.....	30
Genfire Steel Co.....	52
International Steel & Iron Co.....	240
Kalman Steel Co.....	28
Macomber Steel Co.....	236
Milwaukee Corrugating Co.....	302
National Steel Fabric Co.....	165
Northwestern Expanded Metal Co.....	300
Truscon Steel Co.....	44-251-297
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Gallmeyer & Livingston.....	255
Heston & Anderson.....	250
Hutchinson Mfg. Co.....	229
Ralph M. Kennedy.....	290
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Chas. Brunning Co., Inc.....	298
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Warren-Knight Co.....	295
David White Co.....	230
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Henry Diston & Sons, Inc.....	109
Geier & Bluhm, Inc.....	253
Lloyd Floor & Wall Tile Co.....	239
Warren-Knight Co.....	295
David White Co.....	230
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A. S. Aloe Co.....	216
The L. Beckmann Co.....	298
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Henry Diston & Sons, Inc.....	109
Geier & Bluhm, Inc.....	253
Warren-Knight Co.....	295
Wissler Instrument Co.....	297
David White Co., Inc.....	230
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Henry Diston & Sons, Inc.....	109
Geier & Bluhm, Inc.....	253
Lloyd Floor & Wall Tile Co.....	239
The Stanley Works.....	88
Warren-Knight Co.....	295
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A. S. Aloe Co.....	216
Henry Diston & Sons, Inc.....	109
Geier & Bluhm, Inc.....	253
Lloyd Floor & Wall Tile Co.....	239
The Stanley Works.....	88
Warren-Knight Co.....	295
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International Steel & Iron Co.....	240
Kalman Steel Co.....	28
Kewanee Mfg. Co.....	236
Macomber Steel Co.....	236
Geo. L. Mesker Co.....	243
Truscon Steel Co.....	44-251-297
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David Lupton's Sons Co.....	39
Northwestern Expanded Metal Co.....	300
<b>LOCKS—DOOR</b>	
P. & F. Corbin.....	155
Knappe & Vogt Mfg. Co.....	225
Richards-Wilcox Mfg. Co.....	6-7
Sargent & Co.....	30
Schlage Lock Co.....	40



<b>LOCKS-SASH</b>	
P. & F. Corbin	155
Franks Mfg. Co.	3
Hardware Sales Co.	300
National Mfg. Co.	304
Sargent & Co.	20
The Stanley Works	38
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P. & F. Corbin	155
Sargent & Co.	20
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International Steel & Iron Co.	240
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Eternit, Inc.	37
Johns-Manville, Inc.	105
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Consolidated Expanded Metal Co.	30
Genfre Steel Co.	52
International Steel & Iron Co.	240
The Macomber Steel Co.	236
Geo. L. Mesker Co.	243
Milwaukee Corrugating Co.	302
Truscon Steel Co.	44-251-297
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Chas. Brunning Co., Inc.	292
<b>MACHINES-BORING</b>	
A. S. Aloe Co.	210
American Saw Mill Machy. Co.	176-177
Combination Woodworking Mach. Co.	219
Crescent Machine Co.	249-291
Gallmeyer & Livingston Co.	255
Grand Rapids Hdwe. Co.	222
Jones Superior Machine Co.	293
Master Woodworker Mfg. Co.	234
Safe Tool Mfg. Co.	229
J. D. Wallace & Co.	185
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A. S. Aloe Co.	216
Concrete Equipment Co.	287
W. E. Dunn Mfg. Co.	45-153
Lloyd Floor & Wall Tile Co.	289
Miles Mfg. Co.	183
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American Floor Surfacing Mach. Co.	199
<b>MACHINES-DISHWASHING</b>	
Standard Sanitary Mfg. Co.	53
<b>MACHINES-DRAIN TILE</b>	
Concrete Equipment Co.	287
W. E. Dunn Mfg. Co.	45-153
Miles Mfg. Co.	183
<b>MACHINES-FENCE POST</b>	
Concrete Equipment Co.	287
W. E. Dunn Mfg. Co.	45-153
Miles Mfg. Co.	183
<b>MACHINES-FLOOR POLISHING</b>	
A. S. Aloe Co.	216
American Floor Surfacing Machine Co.	199
Clarke Sanding Machine Co.	21
Hild Floor Machine Co.	253
Lincoln-Schleuter Machinery Co.	5
Lloyd Floor & Wall Tile Co.	289
National Sanding Machine Co.	246
<b>MACHINES-FLOOR SURFACING</b>	
(Gas Engine)	
Lincoln Schleuter Machine Co.	5
<b>MACHINES-FLOOR SURFACING</b>	
(Electric)	
A. S. Aloe Co.	216
American Floor Surfacing Mach. Co.	199
Wayvell, Chappell & Co.	244
Clarke Sanding Machine Co.	21
Electric Rotary Machine Co.	251
Everhot Mfg. Co.	288-294
Hild Floor Machine Co.	253
Lincoln-Schleuter Floor Machy. Co.	5
Lloyd Floor & Wall Tile Co.	289
Master Woodworker Mfg. Co.	234
National Sanding Machine Co.	246
Porter-Cable Machine Co.	195-296
The Reid-Way Co.	179
<b>MACHINES-FLOOR SURFACING</b>	
(Hand)	
A. S. Aloe Co.	216
Lincoln-Schleuter Machy. Co.	5
Lloyd Floor & Wall Tile Co.	289
Porter-Cable Machine Co.	179
<b>MACHINES-HOLLOW TILE (Cement)</b>	
Concrete Equipment Co.	287
W. E. Dunn Mfg. Co.	45-153
Miles Mfg. Co.	183
<b>MACHINES-MITERING</b>	
A. S. Aloe Co.	216
Chain Belt Co.	55-188
Consolidated Expanded Metal Co.	30
Gallmeyer & Livingston Co.	255
Hutchinson Mfg. Co., Inc.	229
Jones Superior Machine Co.	293
Milwaukee Corrugating Co.	302
Safe Tool Mfg. Co.	229
The Stanley Works	38
J. D. Wallace & Co.	185

<b>MACHINES-MORTISING</b>	
A. S. Aloe Co.	216
American Sawmill Machinery Co.	176-177
W. B. & J. E. Boice	244
Chain Belt Co.	55-188
Combination Woodworking Machine Co.	219
Crescent Machine Co.	249-291
De Walt Products Co.	10-11
Gallmeyer & Livingston Co.	255
Grand Rapids Hardware Co.	222
Hutchinson Mfg. Co., Inc.	229
Jones Superior Machine Co.	293
Master Woodworker Mfg. Co.	234
Parks Woodworking Machine Co.	257
F. L. Rogers & Co.	226
J. D. Wallace & Co.	185
Wappat Gear Works	218
<b>MACHINES-PAINT SPRAYING</b>	
De Vilbiss Co.	115
Gast Mfg. Corp.	232
<b>MACHINES-RESAW</b>	
American Sawmill Machinery Corp.	176-177
<b>MACHINES-ROOFING TILE</b>	
Concrete Equipment Co.	287
W. E. Dunn Mfg. Co.	45-153
Miles Mfg. Co.	183
<b>MACHINES-SANDPAPERING</b>	
A. S. Aloe Co.	216
American Sawmill Machy. Co.	176-177
Black & Decker Mfg. Co.	192
Clarke Sanding Machine Co.	21
Combination Woodworking Machine Co.	219
Electric Rotary Machine Co.	251
Hutchinson Mfg. Co.	229
Porter-Cable Machine Co.	195-296
The Reid-Way Co.	179
Safe Tool Mfg. Co.	229
J. D. Wallace & Co.	185
<b>MACHINES-SASH PULLEY</b>	
Grand Rapids Hardware Co.	222
<b>MACHINES-SAW FILING</b>	
A. S. Aloe Co.	216
Henry Dismont & Sons, Inc.	109
Foley Saw Tool Co.	217
Scott-Bansbach Machy. Co.	254
Anthony P. Shebel	252
J. D. Wallace & Co.	185
<b>MACHINES-SCRUBBING</b>	
American Floor Surf. Mach. Co.	199
Elec. Rotary Machine Co.	251
Hild Floor Machine Co.	253
<b>MACHINES-SEWER PIPE (Cement)</b>	
<b>MACHINES-SHAPING</b>	
American Sawmill Machinery Co.	176-177
Combination Woodworking Machine Co.	219
Consolidated Expanded Metal Co.	30
The Crescent Machine Co.	249-291
Gallmeyer & Livingston Co.	255
Heston & Anderson	250
J. D. Wallace & Co.	185
<b>MACHINES-SILO</b>	
Metal Forms Corp.	187
Miles Mfg. Co.	183
The Multiplex Concrete Machy. Co.	289
<b>MACHINES-STUCCO</b>	
W. E. Dunn Mfg. Co.	45-153
<b>MACHINES-SURFACING (Desk and Table)</b>	
American Sawmill Machy. Co.	176-177
The Crescent Machine Co.	249-291
Wayvell Chappell & Co.	244
<b>MACHINES-TACKING</b>	
J. B. Crofoot Company	289
<b>MACHINES-TAMPING</b>	
Concrete Equipment Co.	287
W. E. Dunn Mfg. Co.	45-153
Electric Rotary Machine Co.	251
The Miles Mfg. Co.	183
<b>MACHINES-TERRAZZO RUBBING</b>	
American Floor Surf. Machine Co.	199
Electric Rotary Machine Co.	251
Lincoln-Schleuter Floor Machy. Co.	5
Lloyd Floor & Wall Tile Co.	185
<b>MACHINES-WAXING</b>	
American Floor Surf. Machine Co.	199
Electric Rotary Machine Co.	251
Hild Floor Machine Co.	253
<b>MACHINERY-BANDSAW</b>	
A. S. Aloe Co.	216
American Sawmill Machy. Co.	176-177
W. B. & J. E. Boice	244
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Gallmeyer & Livingston Co.	255
Heston & Anderson	250
Hutchinson Mfg. Co., Inc.	229
Jones Superior Machine Co.	293
Kornau Machine Co.	287
Master Woodworker Mfg. Co.	234
The Parks Woodworking Machine Co.	257
Porter-Cable Machine Co.	195-296
Scott-Bansbach Machinery Co.	254
J. D. Wallace & Co.	185
<b>MACHINERY-COAL HANDLING</b>	
Chain Belt Co.	55-188
Construction Machinery Co.	27
<b>MACHINERY-CONVEYING</b>	
Chain Belt Co.	55-188
Ransome Concrete Machinery Co.	184
Sedgwick Machine Works	224
<b>MACHINERY-DRILLING</b>	
Black & Decker Mfg. Co.	192
Scott-Bansbach Machy. Co.	254

<b>MACHINERY-ELEVATING</b>	
Chain Belt Co.	55-188
Jaeger Machine Co.	31
Kimball Brothers Co.	220
Miles Mfg. Co.	183
Sedgwick Machine Works	224
Sidney Elevator Mfg. Co.	296
Stimmel Winch & Machine Works	292
<b>MACHINERY-SAWMILL</b>	
American Sawmill Machy. Co.	176-177
Chain Belt Co.	55-188
Combination Woodworking Machine Co.	219
Hutchinson Mfg. Co., Inc.	229
Jones Superior Machine Co.	293
Ralph M. Kennedy	290
J. D. Wallace & Co.	185
<b>MACHINERY-TRANSMISSION</b>	
Chain Belt Co.	55-188
Concrete Equipment Co.	287
<b>MACHINERY-WOODWORKING-FOOT AND HAND POWER</b>	
Crescent Machine Co.	249-291
Heston & Anderson	250
Jones Superior Machine Co.	293
Wappat Gear Works	218
<b>MACHINERY-WOODWORKING-POWER DRIVEN</b>	
A. S. Aloe Co.	216
American Sawmill Machy. Co.	176-177
Wm. B. & John E. Boice	244
C. H. & E. Mfg. Co.	240
Clarke Sanding Machine Co.	21
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Crowe Mfg. Co.	237
De Walt Products Co.	10-11
Gallmeyer & Livingston Co.	255
Heston & Anderson	250
Hutchinson Mfg. Co.	229
Jones Superior Machine Co.	293
Ralph M. Kennedy	290
Kornau Machine Co.	287
Leach Co.	194
Master Woodworker Mfg. Co.	234
The Parks Woodworking Machine Co.	257
Porter-Cable Machine Co.	195-296
Safe Tool Mfg. Co.	229
Scott-Bansbach Machy. Co.	254
State Mfg. & Eng. Co.	217
J. D. Wallace & Co.	185
Wappat Gear Works	218
Woodworking Machy. Co., Inc.	181
<b>MACHINERY-WOODWORKING-SECOND HAND</b>	
Combination Woodworking Machine Co.	219
Hutchinson Mfg. Co., Inc.	229
Jones Superior Machine Co.	293
Kornau Machine Co.	287
Porter-Cable Machine Co.	195-296
J. D. Wallace & Co.	185
<b>MACHINERY-WOODWORKING-(Universal)</b>	
C. H. & E. Mfg. Co.	240
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Hutchinson Mfg. Co.	229
Jones Superior Machine Co.	293
Kornau Machine Co.	287
Porter-Cable Machine Co.	195-296
J. D. Wallace & Co.	185
<b>MAGNESITE COLORS-See Colors</b>	
<b>MAIL BOXES (Built-In)-See Boxes</b>	
<b>MAIL CHUTES-See Chutes</b>	
<b>MANHOLE COVERS-See Covers</b>	
<b>MANTELS-CONCRETE</b>	
W. E. Dunn Mfg. Co.	45-153
Readybuilt Products Co.	245
<b>MANTELS-MARBLE</b>	
Lloyd Floor & Wall Tile Co.	289
<b>MANTELS-SLATE</b>	
Slatington Slate Co.	292
Slatington-Bangor Slate Syndicate, Inc.	296
Structural Slate Co.	218
<b>MANTELS-TILE</b>	
Associated Tile Mfrs. Inc.	151
Lloyd Floor & Wall Tile Co.	289
<b>MANTELS-WOOD</b>	
The Curtis Cos.	135
<b>MANUAL TRAINING BENCHES-See Benches</b>	
<b>MARBLE</b>	
International Steel & Iron Co.	240
Lloyd Floor & Wall Tile Co.	289
<b>MARBLE CEILINGS-See Ceilings</b>	
<b>MARQUISES</b>	
International Steel & Iron Co.	240
Geo. L. Mesker & Co.	243
Milwaukee Corrugating Co.	302
Wheeling Metal & Mfg. Co.	248
Willis Mfg. Co.	296
<b>MASONS' CEMENT-See Cement</b>	
<b>MASONS' HORSES-See Trusses</b>	
<b>MASONS' LEVELS-See Levels</b>	
<b>MASONRY NAILS-See Nails</b>	
<b>MAST HOISTS-See Derricks</b>	
<b>MEASURING CLAMPS-See Clamps</b>	
<b>MEDICINE CABINETS-See Cabinets, Bathroom</b>	



<b>METAL—EXPANDED</b>	
Consolidated Expanded Metal Co.	30
The Edwards Mfg. Co.	291
Genfire Steel Co.	52
International Steel & Iron Co.	240
Kalman Steel Co.	28
The Macomber Steel Co.	236
Milwaukee Corrugating Co.	302
Northwestern Expanded Metal Co.	300
Truscon Steel Co.	44-251-297
Wheeling Metal & Mfg. Co.	248
Wheeling Corrugating Co.	26
<b>METAL—FABRICATED</b>	
International Steel & Iron Co.	240
Macomber Steel Co.	236
Truscon Steel Co.	44-251-297
<b>METAL CEILINGS—See Ceilings</b>	
<b>METAL COLUMNS—See Columns</b>	
<b>METAL CORNERS—See Corners</b>	
<b>METAL CURTAINS—See Curtains</b>	
<b>METAL LATH—See Lath</b>	
<b>METAL LOCKERS—See Lockers</b>	
<b>METAL LUMBER—See Lumber</b>	
<b>MILLWORK—STEEL</b>	
Majestic Steel Cabinet Co.	297
<b>MILLWORK—WHOLESALE</b>	
The Curtis Co.	135
Hartmann-Sanders Co.	174
Shevlin, Carpenter & Clarke Co.	112
Trimpak Corporation	147
Wheeler Osgood Co.	25
<b>MINERAL WOOL—See Wool</b>	
<b>MIRROR FIXTURES—See Fixtures</b>	
<b>MITER BOXES—See Boxes</b>	
<b>MITER CLAMPS—See Clamps</b>	
<b>MITER CUTTERS—See Cutters</b>	
<b>MITERING MACHINES—See Machines</b>	
<b>MIXERS—COPPER</b>	
Edwards Mfg. Co.	291
David Lupton's Sons Co.	39
Milwaukee Corrugating Co.	302
Wheeling Metal & Mfg. Co.	248
<b>MIXERS—CEMENT</b>	
American Cement Machine Co.	235
Lansing Co.	232
<b>MIXERS—CONCRETE (Batch)</b>	
A. S. Aloe Co.	216
American Cement Machine Co.	235
Chain Belt Co.	55-188
Concrete Equipment Co.	287
Construction Machy. Co.	27
W. E. Dunn Mfg. Co.	45-153
Jaeger Machine Co.	31
The Knickerbocker Co.	292
Koehring Company	180
The Lansing Co.	232
The Leach Co.	196
Miles Mfg. Co.	183
Ransome Concrete Machinery Co.	184
T. L. Smith Co.	193
<b>MIXERS—CONCRETE (Continuous)</b>	
A. S. Aloe Co.	216
Chain Belt Co.	55-188
Jaeger Machine Co.	31
Lansing Co.	232
Leach Co.	196
Miles Mfg. Co.	183
<b>MIXERS—GROUT (Pneumatic)</b>	
Jaeger Machine Co.	31
The Knickerbocker Co.	292
Lansing Co.	232
Miles Mfg. Co.	183
Ransome Concrete Machinery Co.	184
<b>MIXERS—MORTAR AND PLASTER</b>	
A. S. Aloe Co.	216
Chain Belt Co.	55-188
C. H. & E. Mfg. Co.	240
Concrete Equipment Co.	287
Construction Machinery Co.	27
W. E. Dunn Mfg. Co.	45-153
Jaeger Machine Co.	31
The Knickerbocker Co.	292
Lansing Co.	232
The Leach Co.	196
Miles Mfg. Co.	183
T. L. Smith Co.	193
<b>MIXING BOXES—See Boxes</b>	
<b>MORTAR BOARDS—See Boards</b>	
<b>MORTAR BOXES (Steel)—See Boxes</b>	
<b>MORTAR COLORS—See Colors</b>	
<b>MORTAR AND PLASTER MIXERS—See Mixers</b>	
<b>MORTISERS—DOOR LOCK</b>	
Colgan Machy. & Supply Co.	244
F. L. Rogers & Co.	226
Wappat Gear Works	213
<b>MORTISE GAUGES—See Gauges</b>	
<b>MORTISERS—ELECTRIC</b>	
Wappat Gear Works	213
<b>MORTISING MACHINES—See Machines</b>	
<b>MOTORS—ELECTRIC</b>	
A. S. Aloe Company	216
Combination Woodworking Machine Co.	219
The Crescent Machine Co.	249-291
Fairbanks, Morse & Co.	124
Flint & Walling Mfg. Co.	252
General Electric Company	130
Hutchinson Mfg. Co.	229
Ralph M. Kennedy	280
Miles Mfg. Co.	183

<b>MOTOR TRUCKS—See Trucks</b>	
<b>MOULDINGS—BASE (Metal)</b>	
Consolidated Expanded Metal Co.	30
Genfire Steel Co.	52
Milwaukee Corrugating Co.	298
Truscon Steel Co.	44-251-297
Wheeling Corrugating Co.	26
<b>MOULDINGS—BASE (Wood)</b>	
The Curtis Co.	135
Shevlin, Carpenter & Clarke Co.	112
Trimpak Corp.	147
Wheeler Osgood Co.	25
Weyerhaeuser Forest Products	18-19
<b>MOULDINGS—METAL</b>	
Brasco Mfg. Co.	212
Consolidated Expanded Metal Co.	30
The Edwards Mfg. Co.	287
Genfire Steel Co.	52
Milwaukee Corrugating Co.	302
Truscon Steel Co.	44-251-297
Wheeling Corrugating Co.	26
<b>MOULDINGS—PICTURE</b>	
Consolidated Expanded Metal Co.	30
Genfire Steel Co.	52
Milwaukee Corrugating Co.	302
Northwestern Expanded Metal Co.	300
Trimpak Corporation	147
Truscon Steel Co.	44-251-297
Wheeler-Osgood Co.	25
Wheeling Corrugating Co.	26
<b>MOULDINGS—TILE</b>	
Associated Tile Mfrs., Inc.	151
<b>MOULDINGS—WOOD</b>	
The Curtis Co.	135
Shevlin, Carpenter & Clarke Co.	112
Trimpak Corp.	147
Weyerhaeuser Forest Products	18-19
Wheeler-Osgood Co.	25
<b>MOULDING CUTTERS—See Cutters</b>	
<b>MOULDING KNIVES—See Knives</b>	
<b>MOVABLE STAIRS—See Stairs</b>	
<b>MOVING PICTURE BOOTHS—See Booths</b>	
<b>NAILS—CLAMP</b>	
Clamp Nail Co.	294
Wheeling Corrugating Co.	26
<b>NAILS—CUT</b>	
Reading Iron Co.	247
<b>NAILS—FURRING</b>	
Consolidated Expanded Metal Co.	30
Kalman Steel Co.	28
National Steel Fabric Co.	165
Truscon Steel Co.	44-251-297
Wheeling Corrugating Co.	26
<b>NAILS—EXPANSION</b>	
Chicago Expansion Bolt Co.	293
<b>NAILS—GALVANIZED</b>	
The Edwards Mfg. Co.	291
Federal Metal Weatherstrip Co.	250
Milwaukee Corrugating Co.	302
The Ruberoid Co.	157
Stronach Nail Co.	164
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248
<b>NAILS—JAMB</b>	
Stronach Nail Co.	164
Wheeling Corrugating Co.	26
<b>NAILS—MASONRY</b>	
Chicago Expansion Bolt Co.	297
Consolidated Expanded Metal Co.	30
Milwaukee Corrugating Co.	302
Wheeling Corrugating Co.	26
<b>NAILS—LEAD-HEADED</b>	
The Deniston Co.	215
<b>NAILS—ROOFING</b>	
Deniston Company	215
Beckman-Dawson Roofing Co.	46
The Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
The Ruberoid Co.	157
Safepack Mills	101
Stronach Nail Co.	164
Wheeling Corrugating Co.	26
<b>NAILS—ZINC (See Nails, Roofing)</b>	
<b>NAIL SETS—See Sets</b>	
<b>NETTING—WIRE</b>	
Gilbert & Bennett Mfg. Co.	43
<b>NEWELS—METAL</b>	
<b>NUMBERS—HOUSE (See Letters and Numbers)</b>	
<b>OAKUM</b>	
Hardin-Lavin Co.	288
B. Karol & Sons Co.	297
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	295
<b>OIL BURNERS—See Heating Systems</b>	
<b>OPENERS—DOOR (Electric)</b>	
P. & F. Corbin	155
Door Operators Corp.	299
Overhead Door Corp.	8-9
Richards-Wilcox Mfg. Co.	6-7
<b>OPENERS—GARAGE DOOR</b>	
Door Operators Corp.	299
Overhead Door Corp.	8-9
Richards-Wilcox Mfg. Co.	6-7

<b>OPERATORS—SASH</b>	
The Wm. Bayley Co.	171
P. & F. Corbin	155
Genfire Steel Co.	52
International Steel & Iron Co.	240
David Lupton's Sons Co.	39
Geo. L. Mesker & Co.	243
Richards-Wilcox Mfg. Co.	6-7
Sargent & Co.	20
Vento Steel Sash Co.	232
Truscon Steel Co.	44-251-297
<b>ORNAMENTS—COMPOSITION</b>	
<b>ORNAMENTS—ROOF (Metal)</b>	
Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
<b>ORNAMENTS—SHEET METAL</b>	
The Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
<b>ORNAMENTS—ZINC</b>	
The Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
<b>ORNAMENTAL BRACKETS—See Brackets</b>	
<b>ORNAMENTAL MOLDS—See Forms and Molds</b>	
<b>OUTLETS—EAVES TROUGH</b>	
The Edwards Mfg. Co.	291
David Lupton's Sons Co.	39
Milwaukee Corrugating Co.	302
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248
Willis Mfg. Co.	236
<b>OUTLETS—ELECTRIC</b>	
Associated Tile Mfrs., Inc.	151
General Electric Co.	180
The Hart & Hegeman Mfg. Co.	2
Pittsburgh Reflector Co.	250
<b>OUTLETS—RADIO</b>	
Hart & Hegeman Mfg. Co.	2
<b>OUTLET BOXES—See Boxes</b>	
<b>OVEN HEAT REGULATORS—See Regulators</b>	
<b>OVERHEAD CARRIERS—See Carriers</b>	
<b>OVERHEAD DOORS—See Doors</b>	
<b>PACKAGE RECEIVERS—See Receivers</b>	
<b>PAINTS—ASPHALT</b>	
Asphalt Products Co., Inc.	221
Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Malleable Asphalt Co.	29
The Ruberoid Co.	157
Safepack Mills	101
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
<b>PAINTS—BARN</b>	
Samuel Cabot, Inc.	218
Clinton Metallic Paint Co.	289
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
<b>PAINTS—CEMENT AND STUCCO</b>	
Anti-Hydro Waterproofing Co.	113
Samuel Cabot, Inc.	218
The Ruberoid Co.	157
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
<b>PAINTS—HOUSE</b>	
Samuel Cabot, Inc.	218
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
<b>PAINTS—METAL</b>	
Asphalt Products Co., Inc.	221
Barber Asphalt Co.	107
Samuel Cabot, Inc.	218
Clinton Metallic Paint Co.	289
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
<b>PAINTS—WATER</b>	
Sherwin-Williams Co.	23
<b>PAINTS—WATERPROOFING</b>	
Anti-Hydro Waterproofing Co.	113
Asphalt Products Co., Inc.	221
Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Lloyd Floor & Wall Tile Co.	289
Malleable Asphalt Co.	29
Ruberoid Co.	157
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
<b>PAINT BRUSHES—See Brushes</b>	
<b>PAINT FILLERS—See Fillers</b>	
<b>PAINT REMOVERS—See Removers</b>	
<b>PAINT SPRAYING MACHINES—See Machines</b>	
<b>PANELS—PLYWOOD</b>	
Wheeler-Osgood Co.	25
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<b>PAPER—ASBESTOS</b>	
Asbestos Shingle, Slate & Sheathing Co.	22
Hardin-Lavin Co.	288
Johns-Manville, Inc.	105
Milwaukee Corrugating Co.	302
The Ruberoid Co.	157
Safepack Mills	101
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	295
<b>PAPER—BLUEPRINT</b>	
A. S. Aloe Co.	216
Charles Brunning Co., Inc.	296
David White Co.	290



<b>PAPER—DRAWING</b>	
A. S. Aloe Co.	216
Chas. Brunning Co., Inc.	296
Warren-Knight Co.	295
David White Co.	230
<b>PAPER—EMERY</b>	
Behr-Manning Corp.	197
Safe Tool Mfg. Co.	229
<b>PAPER—FLINT</b>	
<b>PAPER—GARNET</b>	
A. S. Aloe Co.	216
American Floor Surf. Mach. Co.	199
Behr-Manning Corp.	197
Carborundum Co.	228
Clarke Sanding Machine Co.	21
Combination Woodworking Mach. Co.	219
Electric Rotary Machine Co.	251
Safe Tool Mfg. Co.	229
<b>PAPER—INSULATING</b>	
Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Samuel Cabot, Inc.	218
Johns-Manville, Inc.	105
Malleable Asphalt Co.	29
Ruberoid Co.	157
Safepack Mills.	101
<b>PAPER—ROOFING AND SHEATHING</b>	
Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Johns-Manville, Inc.	105
The Ruberoid Co.	157
Safepack Mills.	101
<b>PAPER—SAND</b>	
Behr-Manning Corp.	197
Clarke Sanding Machine Co.	21
Electric Rotary Machine Co.	251
National Sanding Machine Co.	246
Parks Woodworking Machine Co.	257
Porter-Cable Machine Co.	195-297
Safe Tool Mfg. Co.	229
<b>PAPER—WALL</b>	
Lincrusta-Walton Co.	208
<b>PARTITIONS—ASBESTOS WOOD</b>	
Asbestos Shingle, Slate & Sheathing Co.	22
Eternit, Incorporated.	37
Johns-Manville, Inc.	105
<b>PARTITIONS—EXPANDED METAL</b>	
Consolidated Expanded Metal Co.	30
Kalman Steel Company.	28
Milwaukee Corrugating Co.	302
Truscon Steel Co.	44-251-297
<b>PARTITIONS—HOLLOW TILE</b>	
Miles Manufacturing Co.	183
<b>PARTITIONS—METAL</b>	
D. A. Ebinger Mfg. Co.	255
David Lupton's Sons Co.	39
Milwaukee Corrugating Co.	302
Truscon Steel Co.	44-251-297
<b>PARTITIONS—METAL LATH</b>	
Consolidated Expanded Metal Co.	30
Genfire Steel Company.	52
Kalman Steel Company.	28
Milwaukee Corrugating Co.	302
New York Kalamain Co.	244
<b>PARTITIONS—ROLLING AND FOLDING</b>	
Edwards Mfg. Co.	291
Overhead Door Corporation.	8-9
Richards-Wilcox Mfg. Co.	6-7
<b>PARTITIONS—SLATE</b>	
Slatington Slate Co.	292
Slatington-Bangor Syndicate, Inc.	296
Structural Slate Co.	218
<b>PARTITIONS—WIRE</b>	
American Chain Co., Inc.	33
Cincinnati Iron Fence Co.	252
International Steel & Iron Co.	240
National Steel Fabric Co.	165
<b>PARTITIONS—WOOD</b>	
Weyerhaeuser Forest Products.	18-19
<b>PARTITION HANGERS—See Hangers</b>	
<b>PARTITION TILE—See Tile</b>	
<b>PASTE—DRAWING BOARD</b>	
A. S. Aloe Company.	216
Charles Brunning Co., Inc.	296
<b>PASTE—ZINC PAINT</b>	
Sherwin-Williams Co.	23
<b>PAVERS—CONCRETE</b>	
Chain Belt Company.	55-188
Leach Company.	196
Ransome Concrete Mch. Co.	184
T. L. Smith Co.	193
<b>PEBBLE DASH—See Dash</b>	
<b>PEBBLE DASH MACHINES—See Machines</b>	
<b>PENCILS—DRAWING (See Instruments, Drawing)</b>	
<b>PERGOLAS</b>	
Edwards Mfg. Co.	291
Hartmann-Sanders Co.	174
<b>PICTURE MOULDINGS—See Mouldings</b>	
<b>PIPE—CHIMNEY (Vitrified Clay)</b>	
Edwards Mfg. Co.	291
<b>PIPE—CONDUCTOR (Copper)</b>	
Chase Metal Works.	42
Edwards Mfg. Co.	291
International Steel & Iron Co.	240
Milwaukee Corrugating Co.	302
Wheeling Corrugating Co.	26
Willis Mfg. Co.	236

<b>PIPE—CONDUCTOR (Sheet Metal)</b>	
Edwards Mfg. Co.	291
International Steel & Iron Co.	240
Milwaukee Corrugating Co.	302
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248
Willis Mfg. Co.	236
<b>PIPE—CONDUCTOR (Zinc)</b>	
Edwards Mfg. Co.	291
David Lupton's Sons Co.	39
Milwaukee Corrugating Co.	302
Wheeling Corrugating Co.	26
<b>PIPE—CULVERT</b>	
Common Brick Mfrs. Assn.	170
Wheeling Corrugating Co.	26
<b>PIPE—DRAIN</b>	
Crane Company.	129
Miles Mfg. Co.	183
<b>PIPE—FURNACE</b>	
American Radiator Co.	14-15
Hardin-Lavin Co.	288
Hess Warming & Ventilating Co.	293
B. Karol & Sons Co.	297
Milwaukee Corrugating Co.	302
Stanley Plumbing & Supply Co.	295
Wheeling Metal & Mfg. Co.	248
<b>PIPE—PLUMBING—BRASS AND COPPER</b>	
Chase Metal Works.	42
Crane Co.	129
B. Karol & Sons Co.	297
Stanley Plumbing & Supply Co.	295
<b>PIPE—SEWER</b>	
Stanley Plumbing & Supply Co.	295
<b>PIPE—STOVE</b>	
Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
Stanley Plumbing Co.	295
Wheeling Corrugating Co.	26
<b>PIPE COLUMNS—See Columns</b>	
<b>PIPE COVERINGS—See Coverings—Boiler and Pipe</b>	
<b>PIPE FITTINGS—See Fittings</b>	
<b>PIPE HANGERS—See Hangers</b>	
<b>PIPE RAILINGS—See Railings</b>	
<b>PIPELESS FURNACES—See Heating Systems</b>	
<b>PIVOT HINGES—See Hinges</b>	
<b>PLANE IRONS—See Irons</b>	
<b>PLANERS—ELECTRIC</b>	
Wappat Gear Works.	218
<b>PLANERS—WOOD (Power)</b>	
A. S. Aloe Co.	216
American Sawmill Mch. Co.	170-177
Combination Woodworking Mch. Co.	219
Crescent Machine Co.	249-291
Heston and Anderson.	250
Jones Superior Mch. Co.	293
Ralph M. Kennedy.	290
Porter-Cable Machine Co.	195-296
Scott-Bansbach Mch. Co.	254
J. D. Wallace & Co.	185
Hutchinson Mfg. Co.	229
Wappat Gear Works.	218
<b>PLANE KNIVES—See Knives</b>	
<b>PLASTER—ASBESTOS</b>	
Johns-Manville, Inc.	105
<b>PLASTER—OXY-CHLORIDE</b>	
Franklyn B. Muller, Inc.	238
<b>PLASTER BOARDS—See Boards</b>	
<b>PLASTER CEMENT—See Cement</b>	
<b>PLATE GLASS—See Glass</b>	
<b>PLATES—CEILING</b>	
American Radiator Co.	14-15
Crane Company.	129
Hardin-Lavin Co.	288
Milwaukee Corrugating Co.	302
Wheeling Metal & Mfg. Co.	248
<b>PLATES—DOOR (See Hardware, Door)</b>	
<b>PLATES—FLOOR—STEEL</b>	
Crane Company.	129
Hardin-Lavin Company.	288
International Steel & Iron Co.	240
Oscar C. Rixon Company.	257
<b>PLATES—STACK (Steel)</b>	
International Steel & Iron Co.	240
<b>PLATES—SWITCH</b>	
Associated Tile Mfrs., Inc.	151
Bakelite Corporation.	220
General Electric Co.	130
Hart & Hegeman Mfg. Co.	2
<b>PLATES—TANK (Steel)</b>	
International Steel & Iron Co.	240
<b>PLATES—WALL</b>	
Bakelite Corporation.	220
Crane Company.	129
Edwards Mfg. Co.	287
Hart & Hegeman Mfg. Co.	2
<b>PLUGS—FUSE</b>	
General Electric Co.	130
Hart & Hegeman Mfg. Co.	2
<b>PLUGS—SCREW</b>	
Chicago Expansion Bolt Co.	297
General Electric Co.	130
Hart & Hegeman Mfg. Co.	2
<b>PLUGS—WALL</b>	
Bakelite Corporation.	220
Donley Brothers Co.	121
Hart & Hegeman Mfg. Co.	2
<b>PLUMBING FIXTURES—See Fixtures</b>	

<b>PLUMBING PIPE—See Pipe</b>	
<b>PLUMBS</b>	
Henry Disston & Sons.	100
Geier & Bluhm, Inc.	253
Stanley Works.	38
<b>PLYWOOD PANELS—See Panels</b>	
<b>POLISHING BRUSHES—See Brushes</b>	
<b>PORCH BASES—See Bases</b>	
<b>PORCH ENCLOSURES—See Enclosures</b>	
<b>PORCH RAILS—See Millwork, Wholesale</b>	
<b>PORCH SCREENS—See Enclosures, Porch</b>	
<b>PORCH SPINDLES—See Millwork, Wholesale</b>	
<b>PORTABLE BUILDINGS—See Buildings</b>	
<b>PORTABLE CONVEYORS—See Conveyors</b>	
<b>PORTABLE ELEVATORS—See Elevators</b>	
<b>PORTABLE SAWS (Power)—See Saws</b>	
<b>PLUGS—TELEPHONE</b>	
<b>PORTABLE TELEPHONES</b>	
American Telephone & Telegraph Co.	298
<b>PORTLAND CEMENT—See Cement</b>	
<b>POSTS—CLOTHES</b>	
American Chain Co.	33
Banks Steel Post Co.	295
Cincinnati Iron Fence Co.	252
Donley Brothers Co.	121
Hubeny Brothers, Inc.	191
<b>POSTS—FENCE</b>	
American Chain Co.	33
Cincinnati Iron Fence Co.	252
Edwards Mfg. Co.	291
Miles Mfg. Co.	183
Structural Slate Co.	218
Weyerhaeuser Forest Products.	18-19
<b>POST BASES—See Bases</b>	
<b>POST CAPS—See Caps</b>	
<b>POST MACHINES—CEMENT—See Machines</b>	
<b>PRESERVATIVES—WOOD</b>	
Genfire Steel Company.	52
Malleable Asphalt Co.	29
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297
<b>PRISM GLASS—See Glass</b>	
<b>PRISM LIGHTS—See Lights</b>	
<b>PROTECTORS—EDGE</b>	
Genfire Steel Co.	52
Truscon Steel Co.	44-251-297
<b>PROTRACTORS—See Instruments, Drawing</b>	
<b>PULLEYS—STUMP</b>	
Lanebro Mfg. Co.	256
Stimmel Winch & Machine Works.	292
<b>PULLEYS—CEILING</b>	
P. & F. Corbin.	155
Lanebro Mfg. Co.	256
Sargent & Co.	20
<b>PULLEYS—SASH</b>	
P. & F. Corbin.	155
Grand Rapids Hardware Co.	222
Knappe & Vogt Mfg. Co.	225
Sargent & Co.	20
<b>PULLEYS—SCREW</b>	
P. & F. Corbin.	155
Sargent & Co.	20
<b>PUMPS—CONTRACTORS</b>	
C. H. & E. Mfg. Co.	240
Chain Belt Co.	55-188
Construction Mch. Co.	27
Jaeger Machine Co.	31
F. E. Myers & Bros. Co.	287
<b>PUMPS—DRAIN</b>	
Construction Mch. Co.	27
Duro Company.	120
Fairbanks, Morse & Co.	124
Jaeger Machine Co.	31
Standard Sanitary Mfg. Co.	53
Stanley Plumbing & Supply Co.	291
<b>PUMPS—ELECTRIC</b>	
Crane Company.	129
Duro Company.	120
Flint & Walling Mfg. Co.	292
Ft. Wayne Eng. & Mfg. Co.	288
Hardin-Lavin Co.	288
Jaeger Machine Co.	31
F. E. Meyer & Bros. Co.	291
<b>PUMPS—FORCE</b>	
C. H. & E. Mfg. Co.	240
Construction Mch. Co.	27
Flint & Walling Mfg. Co.	292
Ft. Wayne Eng. & Mfg. Co.	288
Hardin-Lavin Co.	288
Jaeger Machine Co.	31
F. E. Meyer & Bros. Co.	291
Standard Sanitary Mfg. Co.	53
<b>PUMPS—GASOLINE</b>	
Fairbanks, Morse & Co.	124
Jaeger Machine Co.	31
<b>PUMPS—KITCHEN</b>	
Flint & Walling Mfg. Co.	292
F. E. Myers & Bros. Co.	287
Stanley Plumbing & Supply Co.	291
<b>PUMPS—STEAM</b>	
Fairbanks, Morse & Co.	124
<b>PUSH BRACES—See Braces</b>	



**PUTTY-METAL SASH**

Donley Brothers Co.	121
Gentle Steel Co.	52
International Steel & Iron Co.	240
Kewanee Mfg. Co.	238
H. B. Fred Kuhls Co.	163
Malleable Asphalt Co.	29
Sherwin-Williams Co.	23
Truscon Steel Co.	44-251-297

**PUTTY-ROOFING**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Eternit, Inc.	37
Johns-Manville, Inc.	105
H. B. Fred Kuhls Co.	163
Malleable Asphalt Co.	29
Safepack Mills.	101
Sherwin-Williams Co.	23

**PUTTYLESS WINDOWS—See Windows****RADIATORS—HOT WATER AND STEAM**

Hardin-Lavin Co.	288
Thatcher Company	125

**RADIATORS—ELECTRIC STEAM**

American Radiator Co.	14-15
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**RADIATORS—GAS**

American Radiator Co.	14-15
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**RADIATORS—HOT WATER AND STEAM**

American Radiator Co.	14-15
Crane Company	129
Hardin-Lavin Co.	288
B. Karol & Sons Co.	297
Stanley Plumbing & Supply Co.	295

**RADIATOR COVERS—See Enclosures, Radiator****RADIATOR ENCLOSURES—See Enclosures, Radiator****RADIATOR GRILLES—See Enclosures, Radiator****RADIATOR GUARDS—See Enclosures, Radiator****RADIATOR SHIELDS—See Enclosures, Radiator****RADIATOR VALVES—See Valves, Radiator****RAILINGS—BRASS**

Brasco Mfg. Co.	235
Crane Company	129
International Steel & Iron Co.	240

**RAILINGS—EXPANDED METAL**

Consolidated Expanded Metal Co.	30
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**RAILINGS—IRON**

Cincinnati Iron Fence Co.	252
Crane Company	129
Garden City Plating & Mfg. Co.	292
International Steel & Iron Co.	240
Geo. L. Mesker & Co.	243

**RAILINGS—PIPE**

Cincinnati Iron Fence Co.	252
Crane Company	129
Garden City Plating & Mfg. Co.	292
Hubeny Brothers, Inc.	191
International Steel & Iron Co.	240
B. Karol & Sons Co.	297
Geo. L. Mesker & Co.	243

**RAILINGS—WIRE**

Cincinnati Iron Fence Co.	252
International Steel & Iron Co.	240
Geo. L. Mesker & Co.	243

**RAILS—BARN DOOR**

Frants Mfg. Co.	3
Lanebro Mfg. Co.	256
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7
Stanley Works	38

**RAILS—PORCH**

Cincinnati Iron Fence Co.	252
Curtis Co's.	135
Structural Slate Co.	218
Wheeler, Osgood Co.	25

**RAIL BRACKETS—See Brackets****RANGES—COAL**

American Stove Co.	132
S. Cheney & Son	244
Thatcher Company	125
Wehrle Company	290

**RANGES—ELECTRIC**

Automatic Electric Heater Co.	256
Wehrle Company	290

**RANGES—GAS**

American Stove Co.	132
Thatcher Company	125
Wehrle Company	290

**RANGE BOILERS—See Boilers****RASPS—See Files****REAMERS**

Crane Company	129
Hardin-Lavin Co.	288
Stanley Plumbing & Supply Co.	295

**RECEIVERS—GARBAGE**

Donley Brothers Co.	121
International Steel & Iron Co.	240
Geo. L. Mesker & Co.	243
Peerless Mfg. Co.	223
Wheeling Corrugating Co.	26
Willis Mfg. Co.	236

**RECEIVERS—PACKAGE**

Donley Brothers Co.	121
Excel Metal Cabinet Co.	255
Ideal Steel Products Co.	219
Kalman Steel Co.	28
Geo. L. Mesker & Co.	243
Peerless Mfg. Co.	223
Willis Mfg. Co.	236

**RECEPTACLES—CONDUIT BOX**

General Electric Co.	130
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**RECEPTACLES—FLOOR**

General Electric Co.	130
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**RECEPTACLES—SHOWER**

Crane Company	129
Fiat Metal Mfg. Co.	249
Standard Sanitary Mfg. Co.	63
Wheeling Sanitary Mfg. Co.	149

**REDUCERS—SPEED**

Silent Hoist Winch & Crane Co.	291
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**REFRIGERATORS**

D. A. Matot Co.	288
G. I. Sellers & Sons Co.	137

**REFRIGERATORS—ELECTRIC**

Barber Asphalt Co.	107
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**REFRIGERATOR TRAPS—See Traps****REGISTERS—FLOOR**

Hardin-Lavin Co.	288
Hess Warming & Vent. Co.	293
B. Karol & Sons Co.	297
Milwaukee Corrugating Co.	302
Stanley Plumbing & Supply Co.	295

**REGISTERS—WALL**

Hardin-Lavin Co.	288
Hess Warming & Vent. Co.	293
B. Karol & Sons Co.	297
Milwaukee Corrugating Co.	302
Stanley Plumbing & Supply Co.	295

**REGULATORS—FURNACE**

Hess Warming & Vent. Co.	293
Milwaukee Corrugating Co.	302
Stanley Plumbing & Supply Co.	295

**REGULATORS—TEMPERATURE**

American Radiator Co.	14-15
American Stove Co.	132
Hess Warming & Vent. Co.	293

**REGULATORS—WATER**

American Radiator Co.	14-15
Concrete Equipment Co.	302
H. A. Thrush & Co.	239

**REINFORCING—CEMENT AND STUCCO**

Consolidated Expanded Metal Co.	30
Gentle Steel Company	52
International Steel & Iron Co.	240
Kalman Steel Company	28
Milwaukee Corrugating Co.	302
National Steel Fabric Co.	165
Northwestern Expanded Metal Co.	300
Truscon Steel Co.	44-251-297
Wheeling Corrugating Co.	26

**REINFORCING BARS—See Bars****REINFORCING LATH—See Lath****REMOVERS—PAINT AND VARNISH**

Clarke Sanding Machine Co.	21
Sherwin-Williams Co.	23

**RESAW MACHINES—See Machines****RESIDENCE INTERCOMMUNICATING TELEPHONE SYSTEMS**

American Telephone & Telegraph Co.	296
RESISTANTS—ACID (For Concrete)	113
Anti-Hydro Waterproofing Co.	113
Standard Sanitary Mfg. Co.	63
Truscon Steel Co.	44-251-297

**REVERSIBLE WINDOWS—See Windows****RIDGING—ASBESTOS**

Eternit, Inc.	37
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**RIDGING—SHEET METAL**

Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
Willis Mfg. Co.	236

**RIVETS—COPPER**

The Progressive Mfg. Co.	297
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**RIVETS—STEEL**

International Steel & Iron Co.	240
Progressive Mfg. Co.	297

**ROAD SCRAPERS—See Scrapers****RODS—BRASS**

Chase Metal Works	42
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**RODS—HANGER—See Fixtures, Wardrobe****RODS—LEVELLING**

Geier & Blumh.	253
Wissler Instrument Co.	297

**RODS—LIGHTNING**

Geier & Blumh., Inc.	253
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**ROLLERS—BARN DOOR**

Frants Mfg. Co.	3
Lanebro Mfg. Co.	256
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7

**ROLLERS—HOUSE DOOR**

Frants Mfg. Co.	3
Lanebro Mfg. Co.	256
National Mfg. Co.	304
Richards-Wilcox Mfg. Co.	6-7

**ROLLERS—HOUSE MOVING**

Stimmel Winch & Machine Works	292
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**ROLLING DOORS—See Doors****ROLLING PARTITIONS—See Partitions****ROLLING SHUTTERS—See Shutters****ROOFING—ASBESTOS**

Asbestos Shingle, Slate & Sheathing Co.	22
Eternit, Inc.	37
Johns-Manville, Inc.	105
Ruberoid Co.	157
Safepack Mills.	101

**ROOFING—ASBESTOS SHINGLES**

Asbestos Shingle, Slate & Sheathing Co.	22
Eternit, Inc.	37
Johns-Manville, Inc.	105
National Sheet Metal Rfng. Co.	294
Ruberoid Co.	157
Safepack Mills.	101

**ROOFING—ASPHALT (Ready)**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Johns-Manville, Inc.	105
Ruberoid Co.	157
Safepack Mills.	101

**ROOFING—ASPHALT SHINGLES**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Johns-Manville, Inc.	105
National Sheet Metal Roofing Co.	294
Ruberoid Co.	157
Safepack Mills.	101

**ROOFING—BLENDED SHINGLES**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
C. A. Mauk Lumber Co.	167
Ruberoid Co.	157
Safepack Mills.	101
Structural Slate Company	218

**ROOFING—BUILT-UP**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Johns-Manville, Inc.	105
Malleable Asphalt Co.	29
Ruberoid Co.	157
Safepack Mills.	101
Slatington-Bangor Slate Syn., Inc.	294

**ROOFING—CANVAS**

John Boyle & Co., Inc.	250
Malleable Asphalt Co.	29
Safepack Mills.	101

**ROOFING—COMPOSITION**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Malleable Asphalt Co.	29
Safepack Mills.	101
Ruberoid Co.	157
Slatington-Bangor Slate Syn., Inc.	294

**ROOFING—COPPER SHINGLES**

Edwards Mfg. Co.	291
International Steel & Iron Co.	240
Milwaukee Corrugating Co.	302
National Sheet Metal Rfng. Co.	294
Wheeling Metal & Mfg. Co.	248

**ROOFING—DRIP EDGE**

Miller & Gleason	294
Milwaukee Corrugating Co.	302

**ROOFING—METAL (Corrugated)**

Edwards Mfg. Co.	291
International Steel & Iron Co.	240
Macomber Steel Co.	236
Milwaukee Corrugating Co.	302
Wheeling Corrugating Co.	248
Wheeling Metal & Mfg. Co.	248
Willis Mfg. Co.	236

**ROOFING—METAL (Sheets)**

Edwards Mfg. Co.	291
International Steel & Iron Co.	240
Milwaukee Corrugating Co.	302
Truscon Steel Co.	44-251-297
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248

**ROOFING—METAL SHINGLES**

Edwards Mfg. Co.	291
International Steel & Iron Co.	240
Milwaukee Corrugating Co.	302
National Sheet Metal Roofing Co.	294
Wheeling Metal & Mfg. Co.	248
Wheeling Corrugating Co.	26

**ROOFING—ROLL**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
Ruberoid Company	157
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248

**ROOFING—SLAB SHINGLES**

Barber Asphalt Co.	107
Safepack Mills.	101

**ROOFING—SLATE**

Slatington Slate Co.	296
Slatington-Bangor Slate Syn., Inc.	294
Structural Slate Co.	218

**ROOFING—SLATE SURFACED**

Barber Asphalt Co.	107
Beckman-Dawson Roofing Co.	46
Johns-Manville, Inc.	105
Ruberoid Company	157
Safepack Mills.	101
Slatington Slate Co.	296
Slatington-Bangor Slate Syn., Inc.	294

**ROOFING—STAINED SHINGLES**

Samuel Cabot, Inc.	216
C. A. Mauk Lumber Co.	167
Weatherbest Stained Shingle Co., Inc.	6
Weyerhaeuser Forest Products	16-19



<b>ROOFING—THATCHED</b>	
Slatington-Bangor Slate Syn., Inc.	292
<b>ROOFING—TILE (Asbestos)</b>	
Asbestos Shingle, Slate & Sheathing Co.	22
Eternit, Incorporated	37
Johns-Manville, Inc.	105
Ruberoid Company	157
Safepack Mills	101
<b>ROOFING—TILE (Cement)</b>	
W. E. Dunn Mfg. Co.	45-153
Miles Mfg. Co.	183
Truscon Steel Co.	44-251-297
<b>ROOFING—TILE (Metal)</b>	
Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
National Sheet Metal Roofing Co.	294
Truscon Steel Co.	44-251-297
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248
<b>ROOFING—TIN</b>	
Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
National Sheet Metal Roofing Co.	294
Wheeling Corrugating Co.	26
Wheeling Metal & Mfg. Co.	248
<b>ROOFING—WOOD SHINGLES</b>	
Samuel Cabot, Inc.	218
Shevin, Carpenter & Clarke Co.	112
C. A. Mauk Lumber Co.	187
Weatherbest Stained Shingle Co., Inc.	49
Weyerhaeuser Forest Products	19
<b>ROOFING—ZINC</b>	
Edwards Mfg. Co.	291
Milwaukee Corrugating Co.	302
National Sheet Metal Roofing Co.	294
<b>ROOFING BRACKETS—See Brackets</b>	
<b>ROOFING CEMENT—See Cement</b>	
<b>ROOFING NAILS—See Nails</b>	
<b>ROOFING PAPER—See Paper</b>	
<b>ROOFING PUTTY—See Putty</b>	
<b>ROOFING TILE—See Roofing</b>	
<b>ROOFING TILE MACHINES—See Machines</b>	
<b>ROOFS—INSULATED</b>	
Samuel Cabot, Inc.	218
Johns-Manville, Inc.	105
Malleable Asphalt Co.	29
Ruberoid Company	157
Truscon Steel Co.	44-251-297
Wood Conversion Co.	32
<b>ROOFS—SILO</b>	
Malleable Asphalt Co.	29
Metal Forms Corporation	187
Ruberoid Company	157
Truscon Steel Co.	44-251-297
<b>ROOF COATINGS—See Coatings</b>	
<b>ROOF CONSTRUCTION</b>	
Lamella Roof Syndicate	242
<b>ROOF ORNAMENTS (Metal)—See Ornaments</b>	
<b>ROOF TRUSSES—See Trusses</b>	
<b>ROOF VENTILATORS—See Ventilators</b>	
<b>ROOF WINDOWS—See Windows</b>	
<b>ROOM HEATERS—See Heaters, Cabinet</b>	
<b>ROPE—AWNING (Cotton)</b>	
John Boyle & Co., Inc.	250
<b>ROPE—DUMBWAITER</b>	
International Steel & Iron Co.	240
Sedgwick Machine Works	224
Sidney Elevator Mfg. Co.	296
<b>ROPE—MANILA AND SISAL</b>	
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- ABESTONE Felt Roofing, H. W. Johns-Manville Co., New York, N. Y.
- ACCELO Anti-Freeze Solution, Anti-Hydro Waterproofing Co., New York, N. J.
- ACCO Sash Chain, American Chain Co., Inc., Bridgeport, Conn.
- ACKERMAN-JOHNSON Expansion Screw Anchors, Ackerman-Johnson Co., Chicago.
- ACME Clothes Lines, Samson Cordage Works, Boston, Mass.
- ADAMSTON Flat Glass, Adamston Flat Glass Co., Clarksburg, W. Va.
- ADMIRALTY Tubing, Chase Companies, Inc., Waterbury, Conn.
- ADVANCE Concrete Machines, Lansing Co., Lansing, Mich.
- ADVANCE Pumps, F. E. Myers & Bro. Co., The, Ashland, Ohio.
- AERO Radiators, National Radiator Co., Johnstown, Pa.
- AETNA Sash Cord, Samson Cordage Works, Boston, Mass.
- AGATEX Chemical Cement Floor Hardener, The Truscon Laboratories, Detroit, Mich.
- AGILIS Quick Compression Faucets, Crane Co., Chicago, Ill.
- AGILIS JR. Quick Compression Faucets Crane Co., Chicago, Ill.
- AIKEN Saw Sets, Sargent & Co., New Haven, Conn.
- AIR-WAY Casement Window Hardware, Richards-Wilcox Mfg. Co., Aurora, Ill.
- AJAX Sheathing and Roofing Brackets, Ajax Building Bracket Co., Cleveland Heights, O.
- AJAX High Grade Coll, Log and Dredge Chains, American Chain Co., Inc., Bridgeport, Conn.
- AJAX Insulating Compounds, Sherwin-Williams Co., Cleveland, Ohio.
- AJAX Saw Mill Dogs, American Saw Mill Machinery Co., Hackettstown, N. J.
- AJAX Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.
- ALBION Aluminum Bronze Powder, Aluminum Co. of America, Pittsburgh, Pa.
- ALCOA Aluminum, Aluminum Co. of America, Pittsburgh, Pa.
- ALCOVE Drinking Fountains, Crane Co., Chicago, Ill.
- ALEXANDRIA Baths, Crane Co., Chicago, Ill.
- ALKABAR No-Lime-Burn Primer, Truscon Laboratories, The, Detroit, Mich.
- ALL-NITE-LITE Transformers, General Electric Co., Schenectady, N. Y.
- ALL-STEEL Locks and Sash, National Mfg. Co., Sterling, Ill.
- ALL-STEEL Portable Garages, Edwards Mfg. Co., Cincinnati, Ohio.
- ALLEGAN Road Scrapers, Lansing Company, Lansing, Mich.
- ALOPE Levels, A. S. Aloe & Co., St. Louis, Mo.
- ALOXITE Cloth Grinding Wheels, Discs, Tool Sharpening Stones, etc., Carborundum Company, Niagara Falls, N. Y.
- ALPHA Brass Pipe, Condenser Tubes, Chase Companies, Inc., Waterbury, Conn.
- ALPHA Cement, Alpha Portland Cement Co., Easton, Pa.
- ALPINA Syphon Revolving Ventilators, Milwaukee Corrugating Co., Milwaukee, Wis.
- ALTRURIA Drinking Fountains, Crane Co., Chicago, Ill.
- ALUMINA Screen Cloth, Reynolds Wire Co., Dixon, Ill.
- ALVA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- AMBLER Asbestos Building Products, Asbestos Shingle, Slate & Sheathing Co., Ambler, Pa.
- AMBROTEX Varnish, Truscon Laboratories, The, Detroit, Mich.
- AMERICAN Base and Wall Polisher, American Floor Surfacing Machine Co., Toledo, Ohio.
- AMERICAN Chains, American Chain Co., Bridgeport, Conn.
- AMERICAN Cuckoo Clocks, Alarm and Hall Clocks, American Chime Clock Co., Philadelphia, Pa.
- AMERICAN Metal Tile Milwaukee Corrugating Co., Milwaukee, Wis.
- AMERICAN Radiators, American Radiator Co., New York, N. Y.
- AMERICAN Saw Mill Machinery, American Saw Mill Machinery Co., Hackettstown, N. J.
- AMERICAN Handy Grinder American Floor Surfacing Machine Co., Toledo, Ohio.
- AMERICAN RAPID GRINDER Tile, Marble and Terrace Floor Surface, American Floor Surfacing Machine Co., Toledo, Ohio.
- AMERICAN SPECIAL Plaster Board Nail, American Steel & Wire Co., Chicago, Ill.
- AMERICAN UNIVERSAL Wood Floor Surfacing Machine, American Floor Surfacing Machine Co., Toledo, Ohio.
- ANCHOR BRAND Dry Colors and Fillers, C. K. Williams & Co., Easton, Pa.
- ANDERSEN White Pine Frames, Andersen Frame Co., Bayport, Minn.
- ANDREWS Heaters, Furnaces, Water Supply Systems, etc., Andrews Heating Co., Minneapolis, Minn.
- ANGO Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ANSBOR Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ANTHONY Wire Fence (Zinc Insulated), American Steel & Wire Co., Chicago, Ill.
- ANTI-HYDRO Waterproofing, Anti-Hydro Waterproofing Co., New York, N. J.
- APARTO Lavatory, Crane Co., Chicago, Ill.
- AQUA SILK Waterproof Shower Curtains, Crane Co., Chicago, Ill.
- ARCO Thermostats and Regulators, American Radiator Co., New York, N. Y.
- ARCOLA Hot Water Radiator Outfit and Boiler, American Radiator Co., New York, N. Y.
- ARCUO Drinking Fountains, Crane Co., Chicago, Ill.
- ARCUS Lavatories, Crane Co., Chicago, Ill.
- ARDMORE Lavatories, Crane Co., Chicago, Ill.
- ARGOTILE Strip Shingles, Beckman-Dawson Roofing Co., Chicago, Ill.
- ARKONA Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ARMORTOP Concrete Floor Hardener, Anti-Hydro Waterproofing Co., Newark, N. J.
- ARMPLEX Cooler Door Closers, Chicago Spring Hinge Co., Chicago, Ill.
- ART ROC Coloring and Hardener for Cement, The Truscon Laboratories, Detroit, Mich.
- ASBESTONE Composition Flooring, Franklyn R. Muller Co., Waukegan, Ill.
- ASEPTICOTE Flat Wall Paint, The Truscon Laboratories, Detroit, Mich.
- ASFALSLATE Shingles, Philip Carey Mfg. Co., Lockland, Ohio.
- ASHLAND Pumps, Jacks and Swings, F. E. Myers & Bro. Co., Ashland, Ohio.
- ASYLUM Bath Tubs, Crane Co., Chicago, Ill.
- ATHA Tools, Stanley Rule & Level Co., New Britain, Conn.
- ATLAS Cooler Door Fasteners, Garden City Plating & Mfg. Co., Chicago, Ill.
- ATLAS Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ATLAS Waterclosets, Crane Co., Chicago, Ill.
- ATLO Water Closets, Crane Co., Chicago, Ill.
- AUTO-DOR Electric Operator, Richards-Wilcox Mfg. Co., Aurora, Ill.
- AUTOMATIC Floor Surfacing Machine, Wayvell Chappell & Co., Waukegan, Ill.
- AUTOMATIC Water Heaters, Automatic Electric Heater Co., Philadelphia, Pa.
- AVOLYN Drinking Fountains, Crane Co., Chicago, Ill.
- AVON Semi-Vitreous Porcelain, Wheeling Sanitary Mfg. Co., Wheeling, W. Va.
- BABY Bath Tubs and Closets, Crane Co., Chicago, Ill.
- BAILEY Planes, Stanley Rule and Level Co., New Britain, Conn.
- BAKELITE Products, Bakelite Corp., New York, N. Y.
- BALSAM-WOOL Insulating and Sound Deadener, Wood Conversion Co., Cloquet, Minn.
- BANNER Measuring Tapes, The Lufkin Rule Company, Saginaw, Mich.
- BANTAM JUNIOR Concrete Mixers, Ransome Concrete Machinery Co., Dunellen, N. J.
- BARACIDE Acid and Alkali Proof Coating, The Truscon Laboratories, Detroit, Mich.
- BARNERT Washup Sink, Crane Co., Chicago, Ill.
- BARRACKS Lavatories, Crane Co., Chicago, Ill.
- BATES Steel Poles, Bates Expanded Steel Truss Co., East Chicago, Ind.
- BATES MULTI-WALL Paper Bags, Bates Valve Bag Corp., Chicago.
- BAYLEY-SPRINGFIELD Steel Windows and Doors, Wm. Bayley Co., Springfield, Ohio.
- BAYONNE Duck and Waterproof Cloth and Roof and Deck Cloth, John Boyle & Co., Inc., New York City.
- BEARCAT Mortiser and Borer, The Paxson Co., Dowagiac, Mich.
- BEAVER Saws, Henry Diston & Sons, Philadelphia, Pa.
- BEAVER Woodworking Machinery, Hutchinson Mfg. Co., Norristown, Pa.
- BED-ROCK Planes, Stanley Rule and Level Co., New Britain, Conn.
- BEE Clothes Lines, Samson Cordage Works, Boston 9, Mass.
- BEE HIVE Pitch and Roofing Felt, Samuel Cabot, Inc., Boston, Mass.
- BESSLER Disappearing Stairways, Bessler Disappearing Stairway Co., Akron, Ohio.
- BEVERLY Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- BIG AMERICAN Wood Floor Surfacers, American Floor Surfacing Machine Co., Toledo, Ohio.
- BIG BILL Padlocks, Sargent & Co., New Haven, Conn.
- BIG FOUR Door Hangers and Track, National Mfg. Co., Sterling, Ill.
- BITUBAR Pitch Proof Coating, Truscon Laboratories, Detroit, Mich.

BITUMET Asphalt Coatings for Metals, The Asphalt Products Co., Inc., Syracuse, N. Y.  
 BLACK & DECKER Portable Electric Tools, Black & Decker Mfg. Co., Towson, Md.  
 BLACKFORD Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 BOICE-CRANE Joiners, Woodworking Machinery, etc., W. B. & J. E. Boice, Toledo, Ohio.  
 BOMMER Spring Hinges, Floor Surface Spring Hinges, Door Pivots, Lavatory Stall Hardware, Screen Door Hinges and Door Springs, Bommer Spring Hinge Co., Brooklyn, N. Y.  
 BOSS Mixing Machinery for Concrete and Holists, American Cement Machine Co., Inc., Keokuk, Iowa.  
 BOSTON Faucets, Crane Co., Chicago, Ill.  
 BOYLSTON Lavatories, Crane Co., Chicago, Ill.  
 BRADLEY-MILLER White Pine Frames, Bradley-Miller Co., Bay City, Mich.  
 BRASCO Metal Store Fronts, Brasco Mfg. Co., Chicago, Ill.  
 BRICKMENT (for Brick and Stone Masonry), Louisville Cement Co., Louisville, Ky.  
 BRONCHO Concrete Mixers, Lansing Co., Lansing, Mich.  
 BROOKS Ready Roofing, Johns-Manville, Inc., New York, N. Y.  
 BRUCETON Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 BRUSHING PLASTIC Roof Coating, The Asphalt Products Co., Inc., Syracuse, N. Y.  
 BUCKEYE Pumps, Hydrants, etc., Maat, Foss & Co., Springfield, O.  
 BUENA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 BULL DOG Adjusters, Casement Hardware Co., Chicago, Ill.  
 BULL DOG Chains, Chain Products Co., Cleveland, Ohio.  
 BULL DOG Lock Stove Pipe, Wheeling Corrugating Co., Wheeling, W. Va.  
 BULL NOSE Corner Bead, Milwaukee Corrugating Co., Milwaukee, Wis.  
 BULLDOZER Power Pumps and Working Heads, F. E. Myers & Bro. Co., The, Ashland, Ohio.  
 BULLY BOY Saw Sets, Henry Disston & Sons, Philadelphia, Pa.  
 BURNHAM Heating Boilers, Burnham Boiler Co., Irvington, N. Y.  
 BUTLER Self-Adjusting Window Ventilators, Butler Laboratories, Inc., Brooklyn, N. Y.  
 BUTTON LOCKS Door Locks, Schlage Lock Co., San Francisco, Calif.

CABOT Paints, Paper, Wood Preservatives, Shingle Stains, etc., Samuel Cabot, Inc., Boston, Mass.  
 CAPITAL Barrows, Lansing Co., Lansing, Mich.  
 CAPITOL Boilers, U. S. Radiator Corp., Detroit, Mich.  
 CAPITOL WEATHERSTRIPS, Diamond Metal Weather Strip Co., Columbus, O.  
 CARBORUNDUM Grinding Wheels, Tool Sharpening Stones, Scythes, Razor Strops and Hones and Oil Stones, Discs, etc., Carborundum Co., Niagara Falls, N. Y.  
 CARDINAL Toggery Racks, Chas. Fischer Spring Co., Brooklyn, N. Y.  
 CARTER Power Plane, The R. L. Carter Co., Phoenix, N. Y.  
 CARTER Woodworking Machy., R. L. Carter Co., Inc., Phoenix, N. Y.  
 CECO Column Forms, Reinforcing Bars, etc., Concrete Engineering Co., Omaha, Neb.  
 CECO Weatherstrips, CECO Weatherstrip and Screen Co., Division of Concrete Engineering Co., Chicago, Ill.  
 CENTURY Air and Hand Pumps, Paint and Whitewash Spraying Machines, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 CEPECO Chains, Chain Products Co., Cleveland, Ohio.  
 CHABELCO Chains, Chain Belt Co., Milwaukee, Wis.  
 C. H. & E. Holists, Pumps and Portable Saw Rigs, C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.  
 CHALLENGE Finished and Gauging Plasters, U. S. Gypsum Co., Chicago, Ill.  
 CHALLENGE Measuring Tapes, Lufkin Rule Co., Saginaw, Mich.  
 CHAMET Bronze, Chase Companies, Inc., Waterbury, Conn.  
 CHAMPION Door Lock Mortiser, Colgan Machy. and Supply Co., Columbus, Ohio.  
 CHAMPION Door Springs, Sargent & Co., New Haven, Conn.  
 CHAMPION Drag Saws and Saw Mill Drags, American Saw Mill Machinery Co., Hackettstown, N. J.  
 CHAMPION Finishing and Gauging Plasters, U. S. Gypsum Co., Chicago, Ill.  
 CHAMPION Saw Sets, Henry Disston & Sons, Philadelphia, Pa.  
 CHAMPION Pipe and Boiler Covering, Johns-Manville, Inc., New York, N. Y.  
 CHANNELDRAIN Roofing, Wheeling Corrugating Co., Wheeling, W. Va.  
 CHASE Brass, Chase Companies, Inc., Waterbury, Conn.  
 CHEVROLET Automobiles and Trucks, Chevrolet Motor Co., Detroit, Mich.  
 CHICAGO Cabinet Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 CHICAGO Door Springs, Chicago Spring Butt Co., Chicago, Ill.  
 CHICAGO Expansion Nail, Chicago Expansion Bolt Co., Chicago, Ill.  
 CHICAGO Stevedore Truck, Lansing Co., Lansing, Mich.  
 CHROMITE Tile, Chromite Co., Chicago, Ill.  
 CHROMITE Unions, Crane Co., Chicago, Ill.  
 CHROMOL Hack Saws, Henry Disston & Sons, Philadelphia, Pa.  
 CLARE UNIVERSAL Portable Saw, Clarke Sanding Machine Co., Chicago, Ill.  
 CLARKE VAC-ALL Cleaner, Clarke Sanding Machine Co., Chicago, Ill.  
 CLARKE VACUUM Portable Sander, Clarke Sanding Machine Co., Chicago, Ill.  
 CLARK JEWEL Gas Range, American Stove Co., St. Louis, Mo.  
 CLEARWAY Valves, Crane Co., Chicago, Ill.  
 CLERMONT Lavatories, Crane Co., Chicago, Ill.  
 CLEVELAND Chains, Chain Products Co., Cleveland, Ohio.  
 CLIFTON Lavatories, Crane Co., Chicago, Ill.  
 CLIMAX Barrows, Lansing Co., Lansing, Mich.  
 CLIMAX Wire Netting, Gilbert & Bennett Mfg. Co., Chicago, Ill.  
 CLINTON Face Brick, Finzer Bros. Clay Co., Sugar Creek, Ohio.  
 CLINTON Metallic Paint, Mortar Colors and Cement Colors, Clinton Metallic Paint Co., Clinton, N. Y.  
 CLIPPER Wood and Pole Saws, American Saw Mill Machinery Co., Clossin Lavatories, Crane Co., Chicago, Ill.  
 CLOVER LEAF Hay Carriers, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 COG GEAR Well House, Tank Spray and Cistern Pump, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 COLLOPAKES Colloidal Paints and Stains, Samuel Cabot, Inc., Boston, Mass.  
 COLON Barrows, Lansing Company, Lansing, Mich.  
 COLONIAL Dampers, Colonial Fireplace Co., Chicago, Ill.  
 COLONIAL Lavatories, Crane Co., Chicago, Ill.  
 COLUMBIA Baths, Crane Co., Chicago, Ill.  
 COLUMBUS Leather Cloth and Table Covers, Columbus Union Oil Cloth Co., Columbus, Ohio.

COMBINATION Hay Unloaders, F. E. Myers & Bro. Co., Ashland, Ohio.  
 CONRED Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 CONSERVO Wood Preservatives, Samuel Cabot, Inc., Boston, Mass.  
 COOPER'S Metallic Shingles, National Sheet Metal Roofing Co., Jersey City, N. J.  
 COPLECY Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 COPPERED Metal, Milwaukee Corrugating Co., Milwaukee, Wis.  
 COPR-LOY Sheet Steel, Wheeling Corrugating Co., Wheeling, W. Va.  
 COPTIC Lavatories, Crane Co., Chicago, Ill.  
 CORBIN Locks and Hardware, P. & F. Corbin, New Britain, Conn.  
 CORCORAN Steel Bathroom Cabinets, Corcoran Mfg. Co., Cincinnati, Ohio.  
 CORINTH Baths, Crane Co., Chicago, Ill.  
 CORNA-LATH A Cornerite, North Western Expanded Metal Co., Chicago, Ill.  
 CORNELL Rolling Doors, Cornell Iron Works Co. Inc. Long Island City.  
 CORNER-WISE Garage Door Hardware, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 CORNET Baths, Crane Co., Chicago, Ill.  
 CORRECTO URINALS, Crane Co., Chicago, Ill.  
 CORRUGATED KNO-BURN Self-Furring Metal Lath, North Western Expanded Metal Co., Chicago, Ill.  
 CORSYN Water Closets and Tanks, Crane Co., Chicago, Ill.  
 CORTO Radiators, American Radiator Co., New York, N. Y.  
 CORWITH Baths, Crane Co., Chicago, Ill.  
 COTTAGE Fencing, Gilbert & Bennett Mfg. Co., Chicago, Ill.  
 COUGAR Saws, Henry Disston & Sons, Philadelphia, Pa.  
 CRACO Closet Tanks, Crane Co., Chicago, Ill.  
 CRANE Steam Specialties and Plumbing Supplies, Crane Co., Chicago, Ill.  
 CRANE HARD METAL, Valves and Valve Trimmings, Crane Co., Chicago, Ill.  
 CRANE LAP Flanged Pipe Joints, Crane Co., Chicago, Ill.  
 CRANETILT Steam Traps, Crane Co., Chicago, Ill.  
 CREOLEM Dampproofing for Wood, Truscon Laboratories, The, Detroit, Mich.  
 CRESCENT Band Saws and Woodworking Machinery and Swing Saws, Crescent Machine Co., Leontonia, Ohio.  
 CRESCENT Lavatories, Crane Co., Chicago, Ill.  
 CRESCENT Woodworking Machinery Co., The Crescent Machine Co., Leontonia, Ohio.  
 Creta Drinking Fountains, Crane Co., Chicago, Ill.  
 CRIMPEDGE Eave Troughs, Milwaukee Corrugating Co., Milwaukee, Wis.  
 CRITTALL Casement Windows, Crittall Casement Window Co., Detroit, Mich.  
 CROFOOT Tackers and Staples, J. B. Crofoot Co., Chicago, Ill.  
 CROMAR Finished Oak Flooring, Cromar Co., Williamsport, Pa.  
 CROWE Safety Saw Electric Hand Saw, Crowe Mfg. Co., Cincinnati, Ohio.  
 CROWN Shingle Machine, American Saw Mill Machy. Co., Hackettstown, N. J.  
 CURTIS Woodwork, Curtis Cos., Clinton, Iowa.

DANDIE Concrete Mixers, Koshing Co., Milwaukee, Wis.  
 DANDY Bag Truck, Lansing Co., Lansing, Mich.  
 DANKLER Gas Range, American Stove Co., St. Louis, Mo.  
 DAYLIGHT Hog House Window, Milwaukee Corrugating Co., Milwaukee, Wis.  
 DECO-LIN Wall Coverings, Decorative Co., Saratoga Springs, N. Y.  
 DEFANCE Pumps, Stands and Spray Pumps and Working Heads, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 DELCO-LIGHT Incandescent Lighting Plants, Water Systems and Accessories for Same and Electric Washing Machines, Delco Light Co., Dayton, Ohio.  
 DENTAL Lavatories, Crane Co., Chicago, Ill.  
 DENTUS Lavatories, Crane Co., Chicago, Ill.  
 DETROIT FENESTRA Steel Factory Windows, Detroit Steel Products Co., Detroit, Mich.  
 DE VILBISS Portable Painting Equipment, The DeVilbiss Co., Toledo, Ohio.  
 DE VILBISS Spray-Painting Systems, The DeVilbiss Co., Toledo, Ohio.  
 DEVORO Closet, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 DE WALT Woodworker, Dewalt Mfg. Co., Leola, Pa.  
 DIAMOND Caulking and Glazing Compound, Diamond Metal Weather Strip Co., Columbus, Ohio.  
 DIAMOND Metal Lath, Truscon Steel Co., Youngstown, Ohio.  
 DIAMOND Metal Weatherstrips, Diamond Metal Weather Strip Co., Columbus, Ohio.  
 DIAMOND Mills, Fairbanks, Morse & Co., Chicago, Ill.  
 DIAMOND POINT Saws, Henry Disston & Sons, Philadelphia, Pa.  
 DIAMOND WAY Metal Weather Strips, Diamond Metal Weather Strip Co., Columbus, Ohio.  
 DIAMOND Zinc Screen Slides, Diamond Metal Weather Strip Co., Columbus, O.  
 DIRECT ACTION Gas Range, American Stove Co., St. Louis, Mo.  
 DISTON Crucible Steel Saws, Files, Rasps, Gummars and Premier, Henry Disston & Sons, Inc., Philadelphia, Pa.  
 DIXIE Metallic Shingles, Wheeling Corrugating Co., Wheeling, W. Va.  
 DONLEY Fireplace Equipment, Donley Bros. Co., Cleveland, Ohio.  
 DOUBLE-MESH Herringbone Metal Lath, Genfire Steel Co., Youngstown, Ohio.  
 DORIS Bath Tubs, Crane Co., Chicago, Ill.  
 DOUBLE-DIPPED Shingles, C. A. Mauk Lumber Co., Toledo, Ohio.  
 DOUBLE JACK Wire Stretchers, American Steel & Wire Co., Chicago, Ill.  
 DOUBLE-WHITE Paints, Samuel Cabot, Inc., Boston, Mass.  
 DRENDUL Sand Screens, Gilbert & Bennett Mfg. Co., Georgetown, Conn.  
 DRYVON Expansion Shields, Star Expansion Bolt Co., New York.  
 DUFLEX Door Hangers, Richards-Wilcox, Aurora, Ill.  
 DUL-VAR-TEX Varnish, Truscon Laboratories, The, Detroit, Mich.  
 DUMPEY Saws, Henry Disston & Sons, Philadelphia, Pa.  
 DUNTEX Concrete Roofing Tile, W. E. Dunn Mfg. Co., Holland, Mich.  
 DUNTILE Concrete Building Units, W. E. Dunn Mfg. Co., Holland, Mich.  
 DUNTILE Machinery, W. E. Dunn Mfg. Co., Holland, Mich.  
 DUO & DUO JR., Lavatory Faucets, Crane Co., Chicago, Ill.  
 DUPLEX Flush Valve, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 DUPLEX Pumps, F. E. Myers & Bro., Ashland, Ohio.  
 DUPLEX Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 DUPLEX Steel Bridging, Genfire Steel Co., Youngstown, Ohio.  
 du PONT TONTINE Window Shade Material, E. I. du Pont de Nemours & Co., Inc., Fabrikoid Div., Newburgh, N. Y.  
 DURITE Abrasive Cloth, Paper, etc., Behr-Manning Co., Inc., Troy, N. Y.



- DURO** Household Water Supply Systems, Pumps, etc., The Duro Co., Dayton, Ohio.
- DUROBAR** Chains, Chain Belt Co., Milwaukee, Wis.
- DUROPLATE** Blackboards, E. W. A. Rowles, Chicago, Ill.
- DURUNDUM** Abrasive Cloth, Paper, etc., Manning Abrasive Co., Inc., Troy, N. Y.
- DURUS** Drinking Fountains, Crane Co., Chicago, Ill.
- DUTCH KITCHENET** Kitchen Cabinets, Coppes Bros. & Zook, Napanee, Ind.
- EAGLE** Crimping and Fluting Machines, North Bros. Mfg. Co., Philadelphia, Pa.
- EAGLE** Sash Pulley, Grand Rapids Hardware Co., Grand Rapids, Mich.
- EAST LAKE** Metallic Shingle, Crane Co., Chicago, Ill.
- EASTERN** Garden Wheelbarrows, Lansing Co., Lansing, Mich.
- EATON** Lavatories, Crane Co., Chicago, Ill.
- EBUR** Combination Drinking Fountains and Lavatories, Crane Co., Chicago, Ill.
- ECCENTRIC** Swages, Henry Disston & Sons, Philadelphia, Pa.
- ECCENTRIC BULL DOG** Wire Stretchers, American Steel & Wire Co., Chicago, Ill.
- ECLIPSE** Door Springs and Door Checks, Sargent & Co., New Haven, Conn.
- ECLIPSE** Windmills, Fairbanks, Morse & Co., Chicago, Ill.
- ECONO** Expanded Metal for Concrete Reinforcement and Machine Guards, North Western Expanded Metal Co., Chicago, Ill.
- ECONOMY** Incinerators, Economy Incinerator Co., Milwaukee, Wis.
- ECONOMY** Pumps, Stands and Door Hangers, The F. E. Myers & Bro. Co., Ashland, Ohio.
- EDDYSTONE** Sash Cord, Silver Lake Co., Newtonville, Mass.
- EDELWEISS** White Enamel (Exterior), Truscon Laboratories, Detroit, Mich.
- EDGELEY** Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- EDMANCO** Metal Ceilings, Shingles, Rolling Doors, Shutters, etc., Edwards Mfg. Co., Cincinnati, Ohio.
- EDWARDS** Ceilings and Shingles, Edwards Mfg. Co., Cincinnati, O.
- EDWARDS** Portable Garages, Roofing Tiles, Rolling Doors, Shutters, etc., Edwards Mfg. Co., Cincinnati, Ohio.
- EG-SHELL** Mill White, Sherwin-Williams Co., Cleveland, Ohio.
- EJECTO** Closet, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ELASTIC** Glazing Composition, H. B. Fred Kuhls, Brooklyn, N. Y.
- ELASTITE** Expansion Joints, Philip Carey Co., Chicago, Ill.
- ELECTROBESTOS** Insulating Material, Inc., Johns-Manville, Inc., New York, N. Y.
- ELGLA** Lavatories, Crane Co., Chicago, Ill.
- ELITE** Enamel Jacketed Boiler, Thatcher Co., Newark, N. J.
- EMPIRE** Bolting Machines, American Saw Mill Machinery Co., Hackettstown, N. J.
- ENDURAROC** Blackboards, E. W. A. Rowles, Chicago, Ill.
- ESSEX** Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ETERNIT** Asbestos Shingles, Lumber, Corrugated Sheets, Eternit, Inc., St. Louis, Mo.
- EUREKA** Barrows, Lansing Co., Lansing, Mich.
- EUREKA** Chains, American Chain Co., Bridgeport, Conn.
- EUREKA** Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.
- EVENDRAFT** Chimney Caps, Milwaukee Corrugating Co., Milwaukee, Wis.
- EVERETT** Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- EVERHOT** Branding Irons, The Everhot Mfg. Co., Maywood, Ill.
- EVERLASTING** Chisels, Stanley Rule and Level Co., New Britain, Conn.
- EVERLITE** KOATING Wall Paint, Toch Bros., Inc., New York, N. Y.
- EXPANSION** Metal Trim and Corner Bead, Milwaukee Corrugating Co., Milwaukee, Wis.
- EXPEDIO** Water Closets, Urinals and Slop Sinks, Crane Co., Chicago, Ill.
- EXPULSO** Closets, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- E. Z.** Garage Fixtures, Frantz Mfg. Co., Sterling, Ill.
- E. Z. Shingle** Bunchers, American Saw Mill Machinery Co., Hackettstown, N. J.
- F D C G** Dumbwaiters, Sedgwick Machine Works, New York, N. Y.
- FAIRBANKS** Scales, Fairbanks, Morse & Co., Chicago, Ill.
- FAIRBANKS-MORSE** Gasoline, Kerosene and Diesel Engines, Air Compressors, Centrifugal, Circulating, Deep Well, Power, Railroad and Steam Pumps, Motors and Generators, Motor Cars, Motor Generator Sets, Central Station Power Plants, Railway Appliances, Farm Machinery, Lighting Plants and Water Systems, Fairbanks, Morse & Co., Chicago, Ill.
- FAIRDAY** Washing Machines, Fairbanks, Morse & Co., Chicago, Ill.
- FAIRFAX** Lavatories, Crane Co., Chicago, Ill.
- FALCON** Saws, Henry Disston & Sons, Philadelphia, Pa.
- FAULTLESS** Spray Pumps, Carriers, Hay Fork Pulleys, Door Hangers and Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.
- FAYS** Saws, Henry Disston & Sons, Philadelphia, Pa.
- FEDERAL** Motor Trucks, Federal Motor Truck Co., Detroit, Mich.
- FENESTRA** Steel Casements and Windows, Detroit Steel Products Co., Detroit, Mich.
- FENWICK** Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- FERRITEX** Roof Cement, Truscon Laboratories, Detroit, Mich.
- FERRO** Iron and Steel Filler, Cement, Johns-Manville, Inc., New York, N. Y.
- FIAT** Shower Bath Compartments, Fiat Metal Mfg. Co., Chicago, Ill.
- FIBREWOVE** Insulating Paper, Philip Carey Mfg. Co., Lockland, Ohio.
- FIBROTEX** Roof Cement, Truscon Laboratories, Detroit, Mich.
- FIBROTEX** TOPPING Roof Paint, Truscon Laboratories, Detroit, Mich.
- FIFTH AVE.** Closets and Lavatory, Crane Co., Chicago, Ill.
- FIRE FELT** Pipe and Boiler Covering, Johns-Manville, Inc., New York, N. Y.
- FIREFAX** Refractory Cement, Carborundum Co., Niagara Falls, N. Y.
- FIREITE** Furnace Cement, Johns-Manville, Inc., New York, N. Y.
- FISK** Transportation Cord Tires for Motor Trucks and Automobiles, Fisk Tire Co., Chicago, Ill.
- FITSTITE** Barn Door Hardware, Richards-Wilcox Mfg. Co., Aurora, Ill.
- FLAT TONE** Flat Wall Finish, Sherwin-Williams Co., Cleveland, O.
- FLEXIBLE** Door Hangers, F. E. Myers & Bro. Co., Ashland, Ohio.
- FLEXSTONE** Asbestos Roofing, Johns-Manville, Inc., New York, N. Y.
- FLORIAN** Drinking Fountains, Crane Co., Chicago, Ill.
- FLUTED-CATCH** Sockets and Receptacles, General Electric Co., Schenectady, N. Y.
- FLYING DUTCHMAN** Wood Carving Machinery, Gallmeyer & Livingston Co., Grand Rapids, Mich.
- FOLEY** Automatic Saw Filer, Foley Saw Tool Co., Minneapolis, Minn.
- FORESTBLEND** Face Brick, Finser Bros. Clay Co., Sugar Creek, Ohio.
- FOREST** City Tools, Forest City Bit & Tool Co., Rockford, Ill.
- FORMOCOLOR** QUALITY House Paint, Truscon Laboratories, Detroit, Mich.
- FORSTNER** Auger Bits, The Progressive Mfg. Co., Torrington, Conn.
- FOUNTAIN** Spray Pumps, The F. E. Myers & Bro. Co., Ashland, O.
- 4 SQUARE LUMBER**, Weyerhaeuser Forest Products Co., St. Paul, Minn.
- FRANTZ** Builders Hardware, Frantz Mfg. Co., Sterling, Ill.
- FREE-O-DUST** Floor Sander, Electric Rotary Machine Co., Chicago, Ill.
- FRAZIER** Self-Balanced Stairs, Frazier Stair Co., Pittsburgh, Pa.
- FRIGIDAIRE** Iceless Refrigerators and Ice Cream Cabinets, Delco-Light Co., Dayton, Ohio.
- FUME-SAF** WHITE Enamel, The Truscon Laboratories, Detroit, Mich.
- FYER-WAL** Fire Doors, Richards-Wilcox Mfg. Co., Aurora, Ill.
- G-F** Metal Lath, Bridging, Steel Lumber, Sash, Tile Corner Beads, Trussit Channels, Casements, Wire Mesh, Lintels, Doors, Basement Windows etc., Gensire Steel Co., Youngstown, Ohio.
- G. & B.** Levels, Geler & Bluhm, Inc., Troy, N. Y.
- 3 & B** Poultry Netting and Wire Cloth, Gilbert & Bennett Mfg. Co., Chicago, Ill.
- GALVABOND** Galvanized Iron Primer, Truscon Laboratories, Detroit, Mich.
- GARCY** Clothes Closet Fixtures, Garden City Plating & Mfg. Co., Chicago, Ill.
- GAS-GARD** Water Heater Control, Gas-Gard Co., Rochester, N. Y.
- GAST** Spray Master Air Painters, Gast Mfg. Corp., Bridgman, Mich.
- GENASCO** Protective Products, The Barber Asphalt Co., Philadelphia, Pa.
- GENASCO** LATITE Shingles, The Barber Asphalt Co., Philadelphia, Pa.
- GENASCO** SEALBAC Shingles, The Barber Asphalt Co., Philadelphia, Pa.
- GENASCO** STANDARD TRINIDAD Built Up Roofs, The Barber Asphalt Co., Philadelphia, Pa.
- GENESEE** Wheelbarrows, Lansing Co., Lansing, Mich.
- GENFIRE** Sheet Lath, Genfire Steel Co., Youngstown, Ohio.
- GENUINE** FRANKLIN TUNNEL, Roofing Slate, Slatington Slate Co., Slatington, Pa.
- GEYSER** Pumps, F. E. Myers & Bro. Co., Ashland, Ohio.
- GIANT** Door Hangers, Tracks and Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- GIANT** Saw Mill Dogs, American Saw Mill Machy. Co., Hackettstown, N. J.
- GLIDE** Door Hangers and Tracks, Frantz Mfg. Co., Sterling, Ill.
- GLOBE** Wheelbarrows, Lansing Company, Lansing, Mich.
- GLO-HOT** Electric Fireplaces, Colonial Fireplace Co., Chicago, Ill.
- GLYCO** STAR Electric Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.
- GLYCO** TASSEL Electric Sockets, Hart & Hegeman Mfg. Co., Hartford, Conn.
- GOOD** ROADS Paver, Ransome Concrete Machinery Co., Dunellen, N. J.
- GOODYEAR** RUBBER TILING, Goodyear Tire & Rubber Co., Akron, Ohio.
- GOODYEAR** Tires for Motor Trucks and Automobiles, Goodyear Tire & Rubber Co., Akron, Ohio.
- GOSSETT** Fasteners, Hinges, F. D. Kees Mfg. Co., Beatrice, Neb.
- GOULDING** Saws, Henry Disston & Sons, Philadelphia, Pa.
- GRAHAM** Motor Trucks, Graham Bros. Co., Detroit, Mich.
- GRAND** Garage Door Holder, Sagen Derrick Co., Chicago, Ill.
- GRAND** RAPIDS Grinders, Gallmeyer & Livingston Co., Grand Rapids, Mich.
- GRAND** RAPIDS Sash Pulleys, Grand Rapids Hardware Co., Grand Rapids, Mich.
- GRANTEX** Transparent Coating for Cement Floors (Non-Staining and Dustless), Truscon Laboratories, Detroit, Mich.
- GREAT** SOUTHERN Saws, Henry Disston & Sons, Philadelphia, Pa.
- GREENLAW** AMERICAN Saws, Henry Disston & Sons, Philadelphia, Pa.
- GREYHOUND** Slide Saw Power Woodworker, The Woodworking Machinery Co., Inc., Philadelphia, Pa.
- GRIPLOCK** Chains, Chain Belt Co., Milwaukee, Wis.
- GULF** STREAM Duck and Roofing Canvas, John Boyle & Co., Inc., New York City.
- GUMMER** CUTTER Grinding Machines, Henry Disston & Sons, Philadelphia, Pa.
- GUSHER** Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- H. & A.** Portable Electric Bench Machines, Heston & Anderson, Fairfield, Iowa.
- H. & H.** Electric Switches and Radio Products, Hart & Hegeman Mfg. Co., Hartford, Conn.
- HAGSTROM** Friction Clutches, Hagstrom Mfg. Co., Glen Cove, N. Y.
- HAIRINSUL** Hair Insulation, Johns-Manville, Inc., New York, N. Y.
- HANDY** Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- HANDY** HUTCH Woodworking Machine, Hutchinson Mfg. Co., Norristown, Pa.
- HANDY** MAN Hay Hoists, American Saw Mill Machinery Co., Hackettstown, N. J.
- HART** Electric Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.
- HARTFORD** Lavatories, Crane Co., Chicago, Ill.
- HARTMANN-SANDERS** Pergolas, Colonial Entrances, Columns, Rose Arbors and Garden Equipment, Hartmann-Sanders, Chicago, Ill.
- HAYMAKER** Carriers, The F. E. Myers & Bro. Co., Ashland, Ohio.
- HEACOCK** Saw Mill Machinery, American Saw Mill Machinery Co., Hackettstown, N. J.
- HEATILATOR** Fireplacé Units, Heatilator Co., Syracuse, N. Y.
- HEGEMITE** Molded Electric Switch Plates, Hart & Hegeman Mfg. Co., Hartford, Conn.
- HERALD** Carts, Lansing Co., Lansing, Mich.
- HERCULES** Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- HERMITAGE** Lavatories, Crane Co., Chicago, Ill.
- HESS** Steel Furnaces, Hess Warming & Ventilating Co., Chicago, Ill.
- HIBBEN** Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- HIGGIN** All Metal Screens, Higgin Mfg. Co., Newport, Ky.
- HEAT** Fire Resisting Cement, Clinton Metallic Paint Co., Clinton, N. Y.
- HI-LO** Door Hangers and Track, Frantz Mfg. Co., Sterling, Ill.
- HI-LO** Incandescent Lamp Dimmers, General Electric Co., Schenectady, N. Y.
- HITCHINGS** Sash Operating Devices, Hitchings & Co., Elizabeth, N. J.



HOBERT BROTHERS Battery Chargers, Paint Spray, Electrical Garage Equipment, Hobart Bros., Troy, Ohio.  
 HODELL Chains, etc., Chain Products Co., Cleveland, Ohio.  
 HOLDEN Boiler Stands, Crane Co., Chicago, Ill.  
 HOLLAND Furnaces, Holland Furnace Co., Holland, Mich.  
 HOOSIER Pumps, Water Systems, Jacks, Rams, Regulators, Towers, Tanks, Flint & Walling Mfg. Co., Kendallville, Ind.  
 HORSESHOE Tools, Stanley Rule and Level Co., New Britain, Conn.  
 HOSPITAL Lavatories and Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 HOSPITAL Water Closets, Crane Co., Chicago, Ill.  
 HUBBER Track Scraper, American Sawmill Machinery Co., Hackettstown, N. J.  
 HUTHER Dado Heads and Saws, Huther Bros. Saw Mfg. Co., Rochester, N. Y.  
 HY-PO-RIB Reinforcement Steel Lath, Truscon Steel Co., Youngstown, Ohio.  
 HY-RIB Metal Lath, Truscon Steel Co., Youngstown, Ohio.

I. H. C. Com'l Autos, International Harvester Co., Chicago, Ill.  
 IDALIA Lavatories, Crane Co., Chicago, Ill.  
 IDEAL Bolters, Brackets, Cements, Water Heaters, Valves, Shields, Packless Valves, etc., American Radiator Co., New York, N. Y.  
 IDEAL Elevator Door Hangers, Door Closet and Check and Locking Devices, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 IDEAL Holsts, Universal Holst & Mfg. Co., Cedar Falls, Iowa.  
 IDEAL Steam and Hot Water Heaters, American Radiator Co., Pittsburgh, Pa.  
 ILC Self-Cooled Motor Fans, Blowers, Shutters, etc., Ilg Electric Ventilating Co., Chicago, Ill.  
 ILGAIR Air Washing Unit and Humidifier, Ilg Electric Ventilating Co., Chicago, Ill.  
 ILGAIR Heating System (Unit), Ilg Electric Ventilating Co., Chicago, Ill.  
 ILINI Water Closets, Crane Company, Chicago, Ill.  
 IMPERIAL Pumps and Carriers, F. E. Myers & Bro., Ashland, Ohio.  
 IMPERIAL Wall Plasters, U. S. Gypsum Co., Chicago, Ill.  
 IMPROVED AEBESTOCCEL Pipe Covering Sheets, Johns-Manville, Inc., New York, N. Y.  
 INDUSTRIAL White Enamel (Mill White), Truscon Laboratories, The, Detroit, Mich.  
 INGHAM DRAG Road Scrapers, Lansing Co., Lansing, Mich.  
 INSULITE Plaster Base and Wall Board, Insulite Co., Minneapolis, Minn.  
 INTERLOCK Casement Window Adjuster, The Lyons Mfg. Co., New Haven, Conn.  
 INTERLOCK Conductor Pipe, Milwaukee Corrugating Co., Milwaukee, Wis.  
 INTERLOX Master Slide Rules, Master Rule Mfg. Co., New York, N. Y.  
 INTERNATIONAL Motor Trucks, International Harvester Co., Chicago, Ill.  
 INVINCIBLE Chisel Tooth Saw, Henry Disston & Sons, Inc., Philadelphia, Pa.  
 INVISIBLE JOINT Steel Ceilings, Milwaukee Corrugating Co., Milwaukee, Wis.  
 IROQUOIS Road Building Machinery, Barber Asphalt Paving Co., Philadelphia, Pa.

JACK JUNIOR Engines, Fairbanks, Morse & Co., Chicago, Ill.  
 JACKSON Auto Trailers, The Miles Co., Jackson, Mich.  
 JACKSON Hay Forks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 JACKSON Saws, Henry Disston & Sons, Philadelphia, Pa.  
 JAEGER Concrete Mixers, Jaeger Machine Co., Columbus, Ohio.  
 JERSEY Visos, Stanley Rule and Level Co., New Britain, Conn.  
 JEWELL Planer, American Saw Mill Machinery Co., Hackettstown, N. J.  
 JIFFY Saw Rig, A. S. Aloe Co., St. Louis, Mo.  
 JOHNSON'S PATTERN Gate Latches, Sargent & Co., New Haven, Conn.  
 JOSEPH Barrows, Lansing Co., Lansing, Mich.  
 JUNIOR Spray Pumps and Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.

K-V Clothes Closet Fixtures, Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 K. & M. Magnesia Boiler and Pipe Coverings, Keasby & Mattison Co., Ambler, Pa.  
 KAEN Trussed Bar, Truscon Steel Co., Youngstown, Ohio.  
 KALMANLATH for Building, Kalman Steel Co., Chicago, Ill.  
 KAWNEER Nickel Silver Windows, Kawneer Co., Niles, Mich.  
 KAWNEER Store Front, Copper and Bronze Covered Windows, Kawneer Mfg. Co., Niles, Mich.  
 KEES Building Corners, F. D. Kees Mfg. Co., Beatrice, Neb.  
 KES-COSSETT Screen and Storm Sash Hangers, F. D. Kees Mfg. Co., Beatrice, Neb.  
 KELLOGG MANN Incinerators, Kellogg Mann & Co., Inc., Buffalo, N. Y.  
 KENBAGO Saws, Henry Disston & Sons, Philadelphia, Pa.  
 KENNEDY Ball-Bearing Sawrags, Ralph Kennedy, Philadelphia, Pa.  
 KENT Lavatories and Sinks, Crane Co., Chicago, Ill.  
 KERNER Incinerators, Kerner Incinerator Co., Milwaukee, Wis.  
 KERNERATOR BUILT IN THE CHIMNEY Incinerators, Kerner Incinerator Co., Milwaukee, Wis.  
 KEWANE Steel Sash, Coal Chutes, Kewanee Mfg. Co., Kewanee, Ill.  
 KEY Expanded Metal Lath, Genfire Steel Co., Youngstown, Ohio.  
 KEYSTONE Automatic Storage, Gas Water Heater, Crane Co., Chicago, Ill.  
 KEYSTONE Farm Trucks, International Harvester Co., Chicago, Ill.  
 KEYSTONE Files and Rasps, Saws, Henry Disston & Sons, Philadelphia, Pa.  
 KEYSTONE Hair Felt, Johns-Manville, Inc., New York, N. Y.  
 KEYSTONE Hand-Barrel, etc., Carts, Lansing Co., Lansing, Mich.  
 KEYSTONE Screen Door Sets, McKinney Mfg. Co., Pittsburgh, Pa.  
 KIMBALL Drinking Fountains, Crane Co., Chicago, Ill.  
 KIMBALL Elevators, Kimball Bros. Co., Council Bluffs, Iowa.  
 KING Block Machines, The Miles Mfg. Co., Jackson, Mich.  
 KING'S CHARM Door Hangers and Track, McKinney Mfg. Co., Pittsburgh, Pa.  
 KING'S WOOD FIBRE Wall Plaster, U. S. Gypsum Co., Chicago, Ill.  
 KLEEN GLASS Window and Skylight Cleaner, Truscon Laboratories, The, Detroit, Mich.  
 KLONDYKE Barrows, Lansing Co., Lansing, Mich.  
 KNICKERBOCKER Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 KNICKERBOCKER Carts, Lansing Co., Lansing, Mich.

KNICKERBOCKER Concrete Mixers and Woodworkers, Knickerbocker Co., Jackson, Mich.  
 KNO-BURN Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.  
 KOEHRING Heavy Duty Concrete Mixers, Shovel and Crane Excavators, Koehring Co., Milwaukee, Wis.  
 KOLL COLUMNS, Hartmann-Sanders, Chicago, Ill.  
 K-M Incinerators, Kellogg, Mann & Co., Inc., Buffalo, N. Y.  
 KROMICK Structural Steel Primer, Sherwin-Williams Co., Cleveland, Ohio.  
 K-Y Clothes Closet Fixtures, Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 KWICKSAW Power Hand Saw, Porter-Cable Machine Co., Inc., Syracuse, N. Y.

LABRUM Bath Tubs, Crane Co., Chicago, Ill.  
 LAMELLA Trussless Arch Roofs, Lamella Roof Syndicate, Inc., New York, N. Y.  
 LAMINEX Wooden Doors, Wheeler, Osgood Co., Tacoma, Wash.  
 LAMNECK Laundry Dryer, W. E. Lamneck Company, Columbus, O.  
 LANCET Saws, Henry Disston & Sons, Philadelphia, Pa.  
 LANE'S Door Hangers and Trap, Lanebro Mfg. Co., Inc., West Poughkeepsie, N. Y.  
 LANE'S Steel Bridging, Lanebro Mfg. Co., Inc., West Poughkeepsie, N. Y.  
 LANSING Mixers, Trucks, Scrapers and Carts, Lansing Co., Lansing, Mich.  
 LANSING COLONIAL Hand Cart, Lansing Co., Lansing, Mich.  
 LASTILE Composition Roofing, Philip Carey Mfg. Co., Lockland, O.  
 LEACH-OSHKOSH Concrete Mixers, Leach Co., Oshkosh, Wis.  
 LEADCLAD Sheets, Roofing, Wheeling Metal & Mfg. Co., Wheeling, W. Va.  
 LECTROFLATER Electric Air Compressors, The Black & Decker Mfg. Co., Towson, Md.  
 LEVER BUCKET Spray Pumps, F. E. Myers & Bro. Co., Ashland, O.  
 LIGHTNING Sprayers, F. E. Myers & Bro. Co., Ashland, Ohio.  
 LINCOLN Twin Disc Waxing, Polishing and Scrubbing Machine, Lincoln-Schleuter Machinery Co., Inc., Chicago, Ill.  
 LINCRUSTA Wall Paper, Lincrusta-Walton Co., Hackensack, N. J.  
 LINOVA Bath Tubs, Crane Co., Chicago, Ill.  
 LINOVOUS Bath Tubs, Crane Co., Chicago, Ill.  
 LISPERARD Trucks, Lansing Co., Lansing, Mich.  
 LITERA Dental Lavatories, Crane Co., Chicago, Ill.  
 LITHOTEX Concrete Floor Hardeners, Living-Stone Co., Baltimore, Md.  
 LITTLE GIANT Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 LITTLE WONDER Paver, Combined Concrete Mixer and Paver, Construction Machinery Corporation, Waterloo, Iowa.  
 LIVING STONE Concrete Bond, Living-Stone Co., Baltimore, Md.  
 LOADOMETER Truck Weighing Machinery, The Black & Decker Mfg. Co., Towson, Md.  
 LONE STAR METAL SHINGLE, Edwards Mfg. Co., Cincinnati, O.  
 LONGSPAN Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.  
 LORAIN Oven Heat Regulator, American Stove Co., St. Louis, Mo.  
 LOW DOWN Tank Pumps, F. E. Myers & Bro. Co., Ashland, Ohio.  
 LOXIN Expansion Shields Star Expansion Bolt Co., New York.  
 LUCERNE Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 LUFKIN Rules and Tapes, Lufkin Rule Co., Saginaw, Mich.  
 LUME-TEX Waterproof Aluminum Paint, Truscon Laboratories, Detroit, Mich.  
 LUPTON Window Sash, Elbows, Conductor Pipes, etc., David Lup-ton's Sons Co., Philadelphia, Pa.  
 LUXTON Drinking Fountains, Crane Co., Chicago, Ill.  
 LUXURIA Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 LYDON Lavatories Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 LYMCO Casement Adjusters, The Lyons Mfg. Co., New Haven, Conn.  
 LYNDEN Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 LYONS-Casement Adjusters, Lyons Mfg. Co., New Haven, Conn.

McHENRY Track Levels and Drills, Fairbanks, Morse & Co., Chicago, Ill.  
 MAGIC Concrete Mixers, A. S. Aloe Co., St. Louis, Mo.  
 MAIL-BOX Built-in Mail Boxes, Penn-Greg Mfg. Co., St. Paul, Minn.  
 MAJESTIC Lavatories, Crane Co., Chicago, Ill.  
 MALLORY Standard Shutter Workers, Mallory Mfg. Co., Flemington, N. J.  
 MANCO Asphalt Cement, Philip Carey Mfg. Co., Lockland, Ohio.  
 MANHATAN Lavatories and Urinals, Crane Co., Chicago, Ill.  
 MANNING SPEEDGRITS Abrasives on Paper, Cloth and Combination Sand Paper, Behr-Manning Co., Inc., Troy, N. Y.  
 MARCO Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MARCOSA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MARINERO Cotton Duck, John Boyle & Co., Inc., New York, N. Y.  
 MARMOR Lavatories, Crane Co., Chicago, Ill.  
 MAR-NOT Varnish for Floors Sherwin-Williams Co., Cleveland, O.  
 MARVEL Gas Water Heater, Crane Co., Chicago, Ill.  
 MARVEL Terrazzo Grinding Machine, Lincoln-Schleuter Machinery Co., Inc., Chicago, Ill.  
 MASESTIC Pipe Joint Compound, Truscon Laboratories, The, Detroit, Mich.  
 MASCOT Ship Range, The Thatcher Co., Newark, N. J.  
 MASSILON Steel Building Products, The Macomber Steel Co., Canton, Ohio.  
 MASTER Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, O.  
 MASTER Slide and Folding Rules and Stucco Machines, Master Rule Mfg. Co., Inc., New York, N. Y.  
 MASTER SPRAY Air Painting Equipment, Gast Mfg. Corp., Bridgman, Mich.  
 MASTER Weatherstrips, Master Metal Strip Service, Inc., Chicago, Ill.  
 MASTER Woodworking Machinery, The Master Woodworker Mfg. Co., Detroit, Mich.  
 MATCHER Bits, Henry Disston & Sons, Philadelphia, Pa.  
 MATOT Dumbwaiter, D. A. Matot Co., Chicago, Ill.  
 MAUK Stained Shingles, C. A. Mauk Lumber Co., Toledo, Ohio.  
 MAURETANIA Water Closets Crane Co., Chicago, Ill.  
 MEDIA Drinking Fountain, Crane Co., Chicago, Ill.  
 MEDICUS Lavatory, Crane Co., Chicago, Ill.  
 MEDIO Bath Tubs Crane Co., Chicago, Ill.  
 MERCHANT Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MERITUS Fuller Faucets, Crane Co., Chicago, Ill.  
 MERUS Drinking Fountains, Crane Co., Chicago, Ill.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



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- METALLISTIC Paints and Colors, Sherwin-Williams Co., Cleveland, O.
- METALLITE Abrasive Cloth, Manning Abrasive Co., Inc., Troy, N. Y.
- METALLIC Measuring Tapes, The Lufkin Rule Co., Saginaw, Mich.
- METRIC Closet Valves, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- MEYER Removable Steel Forms, Concrete Engineering Co., Omaha, Neb.
- MIAMI Pure White Steel Bathroom Cabinets, Miami Cabinet Co., Middletown, Ohio.
- MIAMI Cement and Asbestos Wall Tile, Miami Cabinet Co., Middletown, Ohio.
- MICA KOTE Composition Roofing, Philip Carey Mfg. Co., Lockland, Ohio.
- MICRO Adjustable Boring Heads, Porter Cable Machine Co., Syracuse, N. Y.
- MIDGET Punches, Henry Disston & Sons, Philadelphia, Pa.
- MILCOR Cupolas, Metal Corner Beads, Stock Tanks, Hog Troughs and Ventilating Systems Milwaukee Corrugating Co., Milwaukee, Wis.
- MILES Cement Block Machines, Concrete Mixing Machines, Miles Mfg. Co., Jackson, Mich.
- MILLER DRIP EDGE Edging for Prepared Roofing, Miller & Gleason, Olean, N. Y.
- MINIER Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- MODESTO Lavatories, Crane Co., Chicago, Ill.
- MONARCH Planer, Matcher and Moulder, American Sawmill Machinery Co., Hackettstown, N. J.
- MONARCH Radiators, National Radiator Co., Johnstown, Pa.
- MONARCH Saw Sets, Henry Disston & Sons, Philadelphia, Pa.
- MONARCH BRONZE Sash and Transom Chains, Bridgeport Chain Co., Bridgeport, Conn.
- MONITOR Wire Rope, Woven Wire Fence, American Steel & Wire Co., Chicago, Ill.
- MONROE Lavatories, Crane Co., Chicago, Ill.
- MORSE Dust Collectors, Knickerbocker Co., Jackson, Mich.
- MULTI-CATCH Sockets, General Electric Co., Schenectady, N. Y.
- MYERS CENTURY Pumps, The F. E. Myers & Bro. Co., Ashland, O.
- MYERS DUPLEX Painting and Spraying Machines, The F. E. Myers & Bro. Co., Ashland, Ohio.
- MYERS IMPROVED Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- MYERS O. K. Spray Pumps, Pulleys, Door Hangers, Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.
- MYERS PERFECT Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- MYERS SURE LOCK Sling Unloaders and Door Hangers, The F. E. Myers & Bro. Co., Ashland, Ohio.
- MYERS UNIVERSAL Hay Fork Pulley, The F. E. Myers & Bro. Co., Ashland, Ohio.
- NATIONAL AERO Radiators, National Radiator Corp., Johnstown, Pa.
- NATIONAL ELECTRIC Floor Surfacing Machine, National Sanding Machine Co., Chicago, Ill.
- NATIONAL NOVUS Boilers, National Radiator Corp., Johnstown, Pa.
- NATIONAL SMOKELESS Water and Steam Boilers, National Radiator Corp., Johnstown, Pa.
- NEAPOL Water Closets, Crane Co., Chicago, Ill.
- NEDUS Drinking Fountains, Crane Co., Chicago, Ill.
- NERWALL Water Closets, Crane Co., Chicago, Ill.
- NETMESH Expanded Diamond Metal Lath, Milwaukee Corrugating Co., Milwaukee, Wis.
- NEUMAR Lavatories, Crane Co., Chicago, Ill.
- NEVADA Lavatories, Crane Co., Chicago, Ill.
- NEVADA Saws, Henry Disston & Sons, Philadelphia, Pa.
- NEVER BREAK Corner Beads, Milwaukee Corrugating Co., Milwaukee, Wis.
- NEW CENTURY Power Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- NEW CRESCENT Wheelbarrows, Lansing Co., Lansing, Mich.
- NEW CYCLONE Dust Collectors, Knickerbocker Co., Jackson, Mich.
- NEW MODEL Force Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- NEW PROCESS Gas Range, American Stove Co., St. Louis, Mo.
- NEW WAY Door Hangers and Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.
- NEW YORK Brick Trowels, Henry Disston & Sons, Philadelphia, Pa.
- NIAGARA Insulating Materials, Inc., Johns-Manville, Inc., New York, N. Y.
- NIAGARA Pattern Chains, American Chain Co., Inc., Bridgeport, Conn.
- NICALLOY Valve Trimmings, Crane Co., Chicago, Ill.
- NOAHS PITCH Roof Repair Cement, Philip Carey Mfg. Co., Lockland, Ohio.
- NORFOLK Lavatories, Crane Co., Chicago, Ill.
- NORWEST Metal Lath, North Western Expanded Metal Co., Chicago, Ill.
- NO-SLAM Screen Door Checks, Sargent & Co., New Haven, Conn.
- NOVA Lavatories, Crane Co., Chicago, Ill.
- NOWELD Chins, Chain Products Co., Cleveland, Ohio.
- NU AIR Ventilators, Milwaukee Corrugating Co., Milwaukee, Wis.
- NUTMEG Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.
- O. D. P. White Lead, Sherwin-Williams Co., Cleveland, Ohio.
- O. K. Carriers, Door Hangers and Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.
- OKOLONA Water Closets, Crane Co., Chicago, Ill.
- OLD ENGLISH Paint Oil, E. I. du Pont de Nemours & Co., Inc., Paint and Varnish Division, Wilmington, Del.
- OLD VIRGINIA WHITE Paints, Samuel Cabot, Inc., Boston, Mass.
- OLIVER Lavatories and Water Closets, Crane Co., Chicago, Ill.
- OLYMPIC Baths, Crane Co., Chicago, Ill.
- ONAN Power Saws, D. W. Onan & Sons, Minneapolis, Minn.
- OPEX Lacquers, Sherwin-Williams Co., Cleveland, Ohio.
- OPHIR Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- OPINE Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ORBIT Fountains, Crane Co., Chicago, Ill.
- OREGON Saws, Henry Disston & Sons, Philadelphia, Pa.
- ORIOLE Saws, Henry Disston & Sons, Philadelphia, Pa.
- ORNATUS Lavatories, Crane Co., Chicago, Ill.
- OSBORNE Closet Valves, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- OTHELLO Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- OVATUS Lavatories and Tables, Crane Co., Chicago, Ill.
- OVERHEAD Doors, Overhead Door Corp., Hartford City, Ind.
- OVER-WAY Conveying Systems, Richards-Wilcox Mfg. Co., Aurora, Ill.
- OXFORD Drinking Fountains, Crane Co., Chicago, Ill.
- P. C. LATHES, Portable-Cable Machine Co., Syracuse, N. Y.
- P. & B. Acid Resisting Paint, Ruberoid Co., New York, N. Y.
- PAISTE Electric Products, Hart & Hegeman Mfg. Co., Hartford, Conn.
- PANAMA Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- PARAHEX Strip Shingles, Beckman-Dawson Roofing Co., Chicago, Ill.
- PARKS Woodworking Machinery, Parks Woodworking Machine Co., Cincinnati, Ohio.
- PARKWAY Drinking Fountains, Crane Co., Chicago, Ill.
- PARSONS Pureaire Cabinet Gas Range Enclosure, Parsons Co., Detroit, Mich.
- PAUL Pumps and Water Systems, Fort Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.
- PEARL Wire Cloth for Doors and Windows, Gilbert & Bennett Mfg. Co., Chicago, Ill.
- PECOPROOF Waterproofing, Philip Carey Mfg. Co., Lockland, Ohio.
- PEERLESS Fireplace Furnishings and Ranges, Peerless Mfg. Co., Louisville, Ky.
- PEERLESS Radiators, American Radiator Co., Chicago, Ill.
- PEERLESS Roofing, Edwards Mfg. Co., Cincinnati, Ohio.
- PEERLESS Spray Pumps, The F. E. Myers & Bro. Co., Ashland, O.
- PEERLESS HEARTHYRE Heater, Peerless Mfg. Co., Louisville, Ky.
- PELHAM Sash Cord, Silver Lake Co., Newtonville, Mass.
- PENBERTHY Automatic Cellar Drainer Pumps, Penberthy Injector Co., Detroit, Mich.
- PERFECT Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- PERFECT PATTERN Door Springs, National Mfg. Co., Sterling, Ill.
- PERFECTION Brand Oak Flooring, Arkansas Oak Flooring Co., Pine Bluff, Ark.
- PERFECTION Door Springs and Gate Springs, American Steel & Wire Co., Chicago, Ill.
- PERFECTION Glass Boards, Lufkin Rule Co., Saginaw, Mich.
- PERFECTION Indirect Radiators, American Radiator Co., New York, N. Y.
- PERFECTION Sanitary Closet, Chemical Toilet Mfg. Co., Syracuse, N. Y.
- PERFECTION Saw Tables, American Saw Mill Machinery Co., Hackettstown, N. J.
- PERMAROC Blackboard, E. W. A. Rowles, Chicago, Ill.
- PHILADELPHIA Carts, Lansing Co., Lansing, Mich.
- PHILOX Composition Roofing, Philip Carey Mfg. Co., Lockland, O.
- PHOENIX Sash Cord Awning Line, Samson Cordage Works, Boston, Mass.
- PIERSON Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- PITMAN Power and Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- PLASTA-SAYER Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.
- POND Continuous Steel Sash and Sash Operators, David Lupton's Sons Co., Philadelphia, Pa.
- PORTER CABLE Machinery and Tools, Porter-Cable Machine Co., Inc., Syracuse, N. Y.
- PREMIER Automatic Storage Gas Water Heater, Crane Co., Chicago, Ill.
- PREMIER Saws, Henry Disston & Sons, Philadelphia, Pa.
- PREMIER Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.
- PREMO Lavatories, Crane Co., Chicago, Ill.
- PRENTRILL Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- PROGRESS House Boiler, The Thatcher Co., Newark, N. J.
- PULLMAN Sash Balances, etc., Pullman Mfg. Co., Rochester, N. Y.
- PUREAIRE Cabinet Gas Range Enclosure, Parsons Co., Detroit, Mich.
- PURMO Closets, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- PURUS Water Closets, Crane Co., Chicago, Ill.
- PURUS JR. Water Closets, Crane Co., Chicago, Ill.
- PYLAC Colored Lacquer, Truscon Laboratories, Detroit, Mich.
- PYRAMID BRAND Structural Slate, The Structural Slate Co., East Pen Argyl, Pa.
- PYRAMID Weatherstrips, Pyramid Metals Co., Chicago, Ill.
- PYRO-TEX Fireproof Paint, Truscon Laboratories, The, Detroit, Mich.
- QUICK MEAL Gas Range, American Stove Co., St. Louis, Mo.
- QUILT Sheathing and Insulating, Samuel Cabot, Inc., Boston, Mass.
- RANDALL Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- RANSOME STANDARD Building Mixer, Ransome Concrete Machinery Co., Dunellen, N. J.
- RAPID Wood and Stone Surfacing Machines, Lincoln-Schleuter Machinery Co., Inc., Chicago, Ill.
- READING Wrought Iron Pipe and Cut Nails, Reading Iron Co., Reading, Pa.
- RECESS Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- RECONA Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- RED HOOP GALVANIZED Shingle Nails, American Steel & Wire Co., Chicago, Ill.
- RED SEAL Tires, Goodyear Tire & Rubber Co., Akron, Ohio.
- REED Hay Forks, Pullers, The F. E. Myers & Bro. Co., Ashland, O.
- REGAL Roofing, Johns-Manville, Inc., New York, N. Y.
- REICHERT Metal Moulds for Concrete Construction, Metal Forms Corp., Milwaukee, Wis.
- REID-WAY Convertible Sander, Reid-Way Co., Cedar Rapids, Ia.
- RELAX Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.
- RELIABLE Gas Range, American Stove Co., St. Louis, Mo.
- RELIABLE Measuring Tapes, Lufkin Rule Co., Saginaw, Mich.
- RELIABLE Scaffold Brackets, Elite Mfg. Co., Ashland, Ohio.
- RELANCE Door Springs, Chicago Spring Hinge Co., Chicago, Ill.
- REMINDO Combined Switch and Buzzer, General Electric Co., Schenectady, N. Y.
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- RE-PEL-LO Waterproof Duck, John Boyle & Co., New York, N. Y.
- REVERE Lavatories, Crane Co., Chicago, Ill.
- REX Chains, Chain Belt Co., Milwaukee, Wis.
- REX Concrete Mixers and Pavers, Chain Belt Co., Milwaukee, Wis.
- REX CHABELCO Chains, Chain Belt Co., Milwaukee, Wis.
- REX LUROBAR Chains, Chain Belt Co., Milwaukee, Wis.
- REX GRIPLOCK Chains, Chain Belt Co., Milwaukee, Wis.
- REX UNICAST Chains, Chain Belt Co., Milwaukee, Wis.
- REXPART Varnishes, Sherwin-Williams Co., Cleveland, Ohio.
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- RIGSON Builders' Hardware, Oscar C. Rixson Co., Chicago, Ill.
- RIXSON Door Checks and Springs, Oscar C. Rixson Co., Chicago, Ill.
- ROLLAWAY Door Hangers and Track, Frantz Mfg. Co., Sterling, Ill.
- ROLSCREENS, Rolscreen Co., Pella, Iowa.
- ROOF SEAL Roof Paints, The Truscon Laboratories, Detroit, Mich.
- ROSSELLE Fountains, Crane Co., Chicago, Ill.
- ROYAL BLUE Water Heaters, Ruud Mfg. Co., Pittsburgh, Pa.
- ROYAL Lavatories, Crane Co., Chicago, Ill.



ROYAL Shingle Machines, American Saw Mill Machy. Co., Hackettstown, N. J.  
 ROYAL Wood Working Machinery, American Saw Mill Machy. Co., Hackettstown, N. J.  
 RUBEROID Roofing and Shingles, Ruberoid Co., New York, N. Y.  
 RUUD Royal Blue Gas Water Heater, Ruud Mfg. Co., Pittsburgh, Pa.  
 RUGBY Lavatories, Crane Co., Chicago, Ill.  
 RYBOLT Door Hangers and Tracks, Frantz Mfg. Co., Sterling, Ill.  
 RYBOLT FURNACES, Rybolt Heater Co., Ashland, Ohio.

SACHEM Sash Cord, Samson Cordage Works, Boston 9, Mass.  
 SAFEKOTE Roofing and Building Paper, Asphalt Shingle, Safepack Mills, Millis, Mass.  
 SAFEPAK Waterproof, Wrapping and Case Lining Safepack Mills, Millis, Mass.  
 SAGLESS Gate Spring, Pivot Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 SAMSON Chains, Chain Products Co., Cleveland, Ohio.  
 SAMSON Diggers, Saw Sets, Henry Diston & Sons, Inc., Philadelphia, Pa.  
 SAMSON Sash Cord, Shade Cord, Masons' Lines, Solid Braided Rope, Signal Cord, Bell and Register Cord, Samson Cordage Works, Boston, Mass.  
 SANA-BESTOS Floor Tiles, Franklin R. Muller Co., Waukegan, Ill.  
 SANDER PLANE Hand Sander, American Floor Surfacing Machine Co., Toledo, Ohio.  
 SAN-EQUIP Septic Tanks, Chemical Toilet Corp., Syracuse, N. Y.  
 SANETO Water Closets, Crane Co., Chicago, Ill.  
 SANFORD Loggings, Tools, Leach Co., Oakkosh, Wis.  
 SANITARY School Indirect Radiators, American Radiator Co., New York, N. Y.  
 SANITAS Wall Covering, Standard Textile Products Co., New York, N. Y.  
 SANITEX Sanitary Closet Seat Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 SANTO Urinals, Crane Co., Chicago, Ill.  
 SANWALL Water Closets, Crane Co., Chicago, Ill.  
 SARGENT Steel Squares, Latches, Padlocks, Door Checks, etc., Sargent & Co., New Haven, Conn.  
 SASGEN Derricks, Sagen Derrick Co., Chicago, Ill.  
 SAWYER'S FAVORITE Mill Board, American Saw Mill Machinery Co., Hackettstown, N. J.  
 SCAR-NOT Varnish, Sherwin-Williams Co., Cleveland, Ohio.  
 SCHLAGE BUTTON LOCKS Door Locks, Schlage Lock Co., San Francisco, Calif.  
 SCHLUETER Rapid Floor Surfacers, Lincoln-Schlueter Machy. Co., Inc., Chicago, Ill.  
 SCHRODER Eaves Trough Hanger, F. D. Kees Mfg. Co., Beatrice, Neb.  
 SCRUI Anchor, Star Expansion Bolt Co., New York.  
 SCOVILLE'S Pulleys, S. Cheney & Son, Manlius, N. Y.  
 SEATCO Water Closets, Crane Co., Chicago, Ill.  
 SEBCO Fasteners and Anchors, Star Expansion Bolt Co., New York.  
 SEDGWICK Elevators, Sedgwick Machine Works, New York, N. Y.  
 SELF-SENTERING Metal Lath, Genfre Steel Co., Youngstown, O.  
 SELFLOCK Eavetrough Hangers, Milwaukee Corrugating Co., Milwaukee, Wis.  
 SELLERS Kitchen Cabinets, G. I. Sellers & Sons Co., Elwood, Ind.  
 SEMCO Elevators, Sidney Elevator Mfg. Co., Sidney, Ohio.  
 SEMI Milling Saws, Huther Bros. Saw Mfg. Co., Rochester, N. Y.  
 SENIOR Spray Pumps and Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SEPCO Flameless Water Heater, Automatic Electric Heater Co., Philadelphia, Pa.  
 SERENO Drinking Fountains, Crane Co., Chicago, Ill.  
 SEVILLE Lavatories, Crane Co., Chicago, Ill.  
 SHADY-WAY Roller Awnings, Shanklin Mfg. Co., Inc., Springfield, Ill.  
 SHANKLIN Awnings, Shanklin Mfg. Co., Inc., Springfield, Ill.  
 SHELBAV Lavatories, Crane Co., Chicago, Ill.  
 SHELBAV Lavatories, Crane Co., Chicago, Ill.  
 SIDNEY Elevators, Sidney Elevator Mfg. Co., Sidney, Ohio.  
 SIDNEY Woodworking Machinery, Sidney Machine Tool Co., Sidney, Ohio.  
 SILVER Lake Awning, Dumbwaller, Sash, Shade, Ball, Trolley and Ventilator Cords, Silver Lake, Newtonville, Mass.  
 SILVER SEAL Aluminum-asphalt Paints, The Asphalt Products Co., Inc., Syracuse, N. Y.  
 SILVER STAR Electric Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.  
 SIMPLEX Concrete Mixer, The Miles Mfg. Co., Jackson, Mich.  
 SIMPLEX Door Hangers, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 SIMPLEX Levels, Chas. Bruning Co., Chicago, Ill.  
 SIMPLEX Single and Double Acting Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 SIMPLEX Pumps, Standards, Pumps, Jacks and Door Hangers, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SIMPLEX Saw Mill Dogs, American Saw Mill Machinery Co., Hackettstown, N. J.  
 SIMPLEX Woodworker, Combination Woodworking Machine Co., Chicago, Ill.  
 SINGER Block Machines, The Miles Mfg. Co., Jackson, Mich.  
 SINTON Baths, Crane Co., Chicago, Ill.  
 SINFABRICK (now known as Steeltex), National Steel Fabric Co., Pittsburgh, Pa.  
 SITZ Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 SIX-LEVER Padlocks, Sargent & Co., New Haven, Conn.  
 SKILSAW Electric Saws, Skilsaw, Inc., Chicago, Ill.  
 SLATILE Roofing, Beckman-Dawson Roofing Co., Chicago, Ill.  
 SLOANE Lineoleums, W. & J. Sloane Mfg. Co., Trenton, N. J.  
 SLYPHON Regulators, Air Brakes, Radiator Valves, American Radiator Co., New York, N. Y.  
 SMITH Concrete Mixers, T. L. Smith Co., Milwaukee, Wis.  
 SMITH Tilting and Non-Tilting Concrete Mixers, T. L. Smith & Co., Milwaukee, Wis.  
 SMITHTYPE Rebuilt Typewriters, Smith Typewriter Sales Co., Chicago, Ill.  
 SNAPCATCH Porcelain Sockets and Receptacles, General Elec. Co., Schenectady, N. Y.  
 SNO WHITE Enamel, The Truscon Laboratories, Detroit, Mich.  
 SOLID COMFORT Farm Trucks, International Harvester Co., Chicago, Ill.  
 SOLVAY Calcium Chloride, Solvay Sales Corp., New York, N. Y.  
 SOUTHERN Barrows, Lansing Co., Lansing, Mich.  
 SPECIAL Shovels and Scoops, Fairbanks, Morse & Co., Chicago, Ill.  
 SPEED MARVEL Wood Working Mach., Hutchinson Mfg. Co., Norristown, Pa.  
 SPEEDGRITS Abrasive Paper, Cloth and Combination, Behr-Manning Co., Troy, N. Y.  
 SPEEDMATIC Floor Sander, Porter-Cable Machine Co., Syracuse, N. Y.  
 SPIRO Water Closets, Crane Co., Chicago, Ill.

SPRAGUE Fixtures, General Electric Co., Schenectady, N. Y.  
 SPRINGIN Toggle Bolts, Star Expansion Bolt Co., New York.  
 STANDARD Bath Room Fixtures, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 STANDARD Roofings, Beckman-Dawson Roofing Co., Chicago, Ill.  
 STANDARD Trowels, Henry Diston & Sons, Philadelphia, Pa.  
 STANLEY Tools, Stanley Rule and Level Co., New Britain, Conn.  
 STANLEY FOUR-SQUARE HOUSEHOLD Tools, Stanley Rule and Level Co., New Britain, Conn.  
 STANVAR Wax Like Finish, Standard Varnish Co., New York, N. Y.  
 STAR Cement, Louisville Cement Co., Louisville, Ky.  
 STAR Lock Stove Pipe, Wheeling Corrugating Co., Wheeling, W. Va.  
 STAR Metal Shingles, Wheeling Corrugating Co., Wheeling, W. Va.  
 STAR Tanks, Towers and Windmills, Flint & Walling Co., Kendallville, Ind.  
 STAY-RIB Metal Lath, Milwaukee Corrugating Co., Milwaukee, Wis.  
 STAYON Door Hangers and Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 STEELCOTE Portable Garages, Edwards Mfg. Co., Cincinnati, Ohio.  
 STEELCRETE Expanded Metal, Consolidated Expanded Metal Co., Wheeling, W. Va.  
 STEELGRIP Clamp Nails or Splines, Clamp Nail Co., Chicago, Ill.  
 STEELHART Stucco Base, North Western Expanded Metal Co., Chicago, Ill.  
 STEELTEX Reinforcing and Plaster Base, National Steel Fabric Co., Pittsburgh, Pa.  
 STERLING Surveying and Engineering Instruments, Warren-Knight Co., Philadelphia, Pa.  
 STERLING INDIRECT Radiators, American Radiator Co., New York, N. Y.  
 STONETEX Exterior Dampproof Coating for Concrete and Masonry, Truscon Laboratories, Detroit, Mich.  
 STORM PROOF Hangers, National Mfg. Co., Sterling, Ill.  
 STRONACH Non-Splitting Nails, Stronach Nail Co., Pittsburgh, Pa.  
 STUCCO Waterproof Cement Paint, The Truscon Laboratories, Detroit, Mich.  
 STUCCOTEX Hydraulic Paint, Truscon Laboratories, The, Detroit, Mich.  
 SUBSIDO Closets, Crane Co., Chicago, Ill.  
 SUCCESS Chemical Fire Extinguisher, Johns-Manville, Inc., New York, N. Y.  
 SUN-RED EDGE Screen Cloth, Reynolds Wire Co., Dixon, Ill.  
 SUPER-POR SEAL Transparent Dampproofing for Concrete and Masonry, Truscon Laboratories, The, Detroit, Mich.  
 SUPER-RADIANT Gas Heaters, Wheeling Corrugating Co., Wheeling, W. Va.  
 SUPERIOR Metal Corner Bead, Milwaukee Corrugating Co., Milwaukee, Wis.  
 SUPERIOR Woodworking Machy., Jones Superior Machine Co., Chicago, Ill.  
 SUPREME Roofings, Beckman-Dawson Roofing Co., Chicago, Ill.  
 SURBAS Lavatories, Crane Co., Chicago, Ill.  
 SURBOL Lavatories, Crane Co., Chicago, Ill.  
 SURE GRIP Carriers, Door Hangers and Tracks, Hay Forks, Pulleys, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SURE LOCK Carriers, Unloaders, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SURETY Composition Roofing, Philip Carey Mfg. Co., Lockland, O.  
 SURLAV Lavatories, Crane Co., Chicago, Ill.  
 SUWANEE Saws, Henry Diston & Sons, Inc., Philadelphia, Pa.  
 SYMMETRIC Stone Crushers, The T. L. Smith Co., Milwaukee, Wis.  
 SYRACUSE Sanders, Porter-Cable Machine Co., Syracuse, N. Y.  
 S. W. P. Prepared Paint, Sherwin-Williams Co., Cleveland, Ohio.

TAKE-ABOUT Sanding Machines, Porter-Cable Machine Co., Inc., Syracuse, N. Y.  
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 TARINA Baths, Crane Co., Chicago, Ill.  
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 TELSA Compression Cocks, Crane Co., Chicago, Ill.  
 TELSA JR., Compression Faucets, Crane Co., Chicago, Ill.  
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 THATCHER Boilers and Furnaces, The Thatcher Co., Newark, N. J.  
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 THATCHER Boilers, Thatcher Co., Newark, N. J.  
 3-TY Steel Bridging, Lanebro Mfg. Co., Inc., West Poughkeepsie, N. Y.  
 TILE-TEX Resilient Floor Tiles, The Tile-Tex Co., Chicago Heights, Ill.  
 TITELock American and Spanish Metal Tiles and Shingles, Milwaukee Corrugating Co., Milwaukee, Wis.  
 TOLEDO Saws, Henry Diston & Sons, Philadelphia, Pa.  
 TOLVA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 TOP NOTCH Sash Pulleys, Grand Rapids Hardware Co., Grand Rapids, Mich.  
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 TOURAINE Fountains, Crane Co., Chicago, Ill.  
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 TRIANGLE Wire Mesh for Concrete Reinforcement, American Steel & Wire Co., Chicago, Ill.  
 TRIMPAK Interior Trim, Trimpak Corp., New York, N. Y.  
 TRIPLEX Single and Double Acting Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 TRIUMPH Extension Garment Carriers, Garden City Plating & Mfg. Co., Chicago, Ill.  
 TRIUMPH Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.



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**YORK** Drinking Fountains, Crane Co., Chicago, Ill.

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**ZIMMERMAN** Porch Base, S. Cheney & Son, Manlius, N. Y.  
**ZIP** Saws, Henry Disston & Sons, Philadelphia, Pa.

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**The "CLASSIFIED DIRECTORY AND BUYERS' GUIDE",**  
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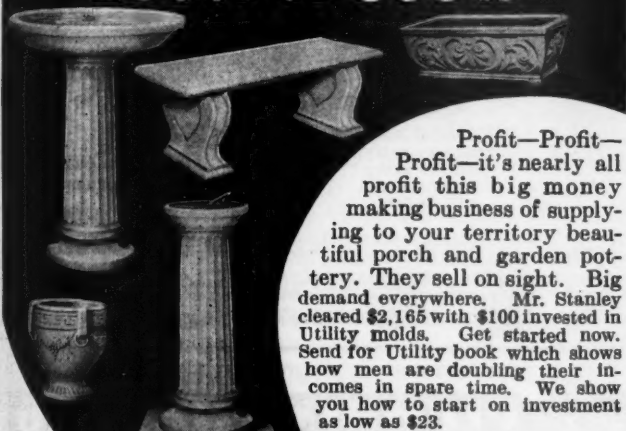
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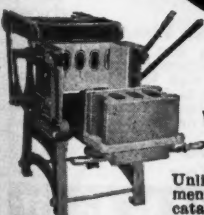
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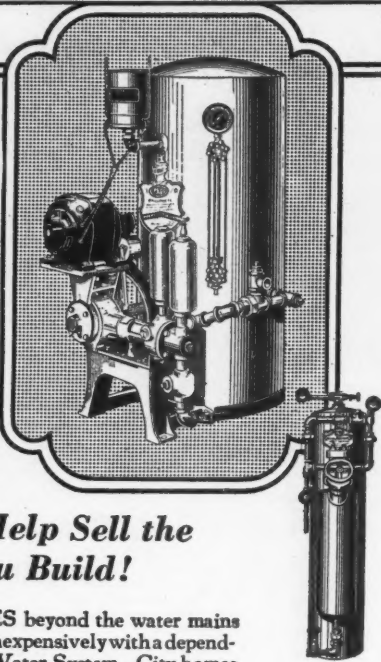
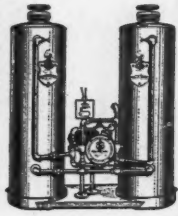
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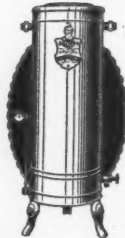
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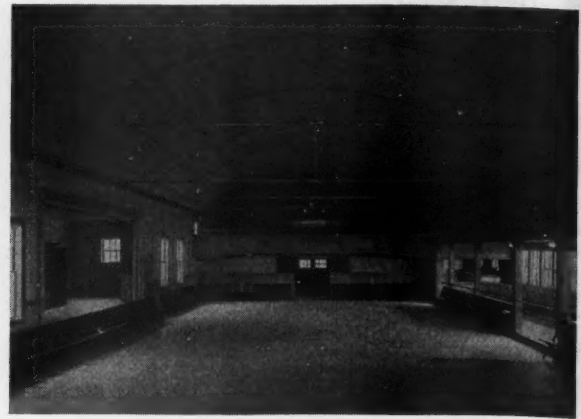
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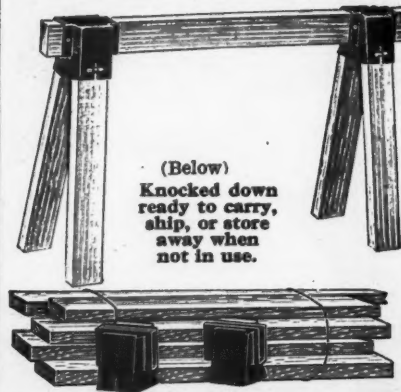
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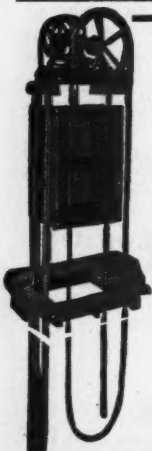
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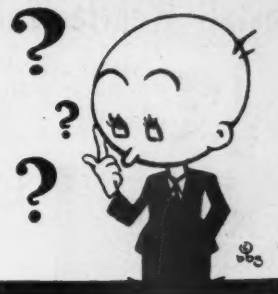
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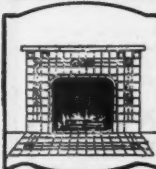
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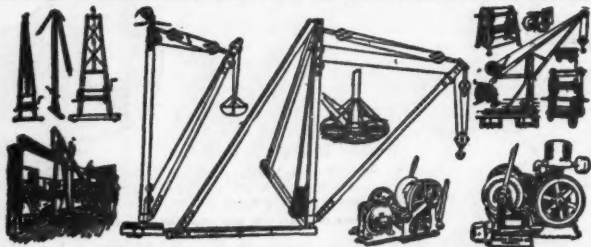
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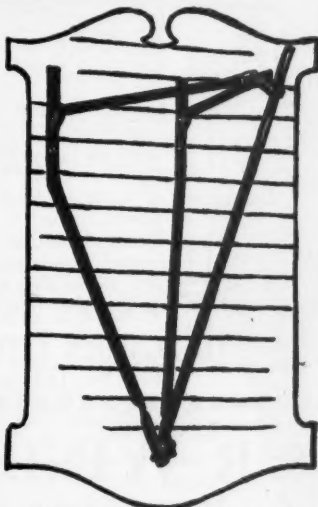
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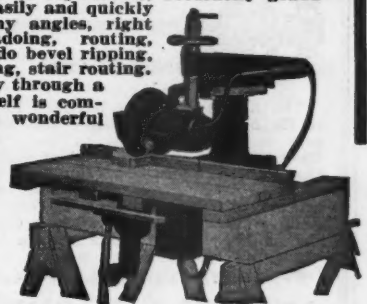
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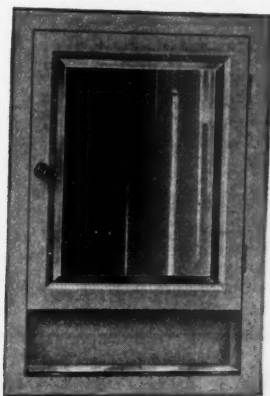
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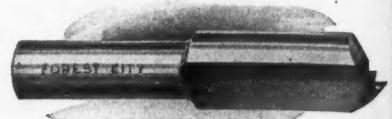
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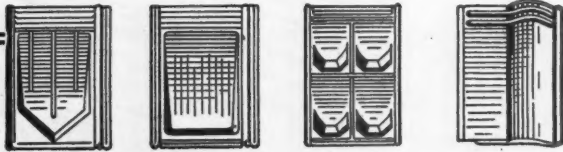
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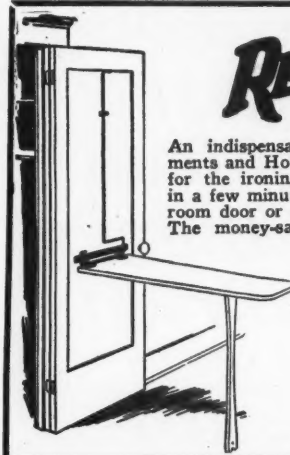
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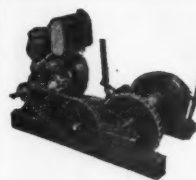
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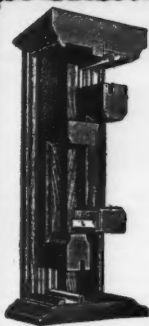
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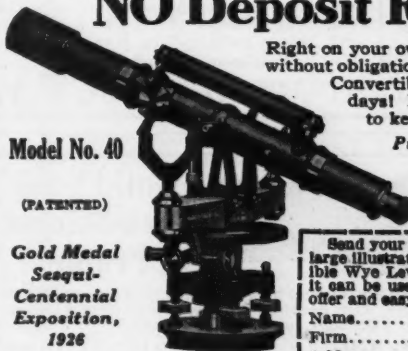
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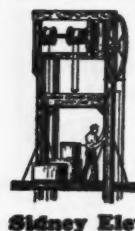
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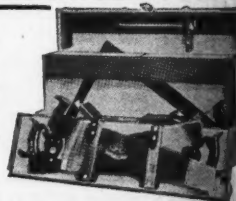
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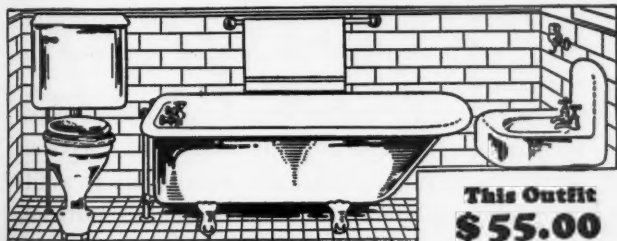
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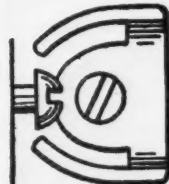
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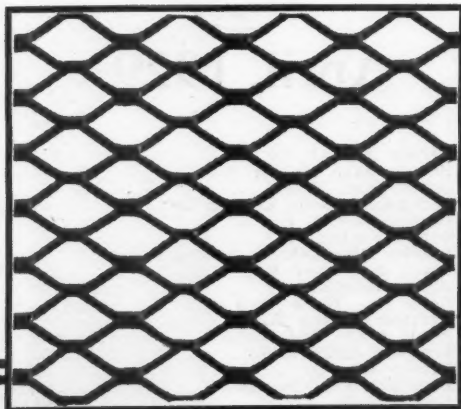
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**AMERICAN BUILDER.**



# No other lath has the **RIGIDITY** of Stay-rib

.....a *Milcor Product*

**M**ILCOR STAY-RIB Metal Lath has earned an unusual preference among builders due to its stiffness. No other lath has the same rigidity... for it is made possible only by an exclusive design expanded by a special patented *Milcor Process*. The longitudinal reinforcing ribs are exceptionally wide... they have unusual structural strength.

The result is that STAY-RIB is by far the easiest to handle and the most economical to apply. It goes in faster... especially on the ceilings... because it does not flop or bend under its own weight. One man can hold and apply a sheet of STAY-RIB without any trouble. It means time and money saved.

STAY-RIB is also free from sharp points. Every edge is straight and true... a perfect fit on the laps.

On your next job use STAY-RIB. It is the ideal plaster base. Although STAY-RIB has an adequate surface of metal, it is achieved without excess weight through the patented expanding process. Try STAY-RIB and learn by actual experience how much better it really is.

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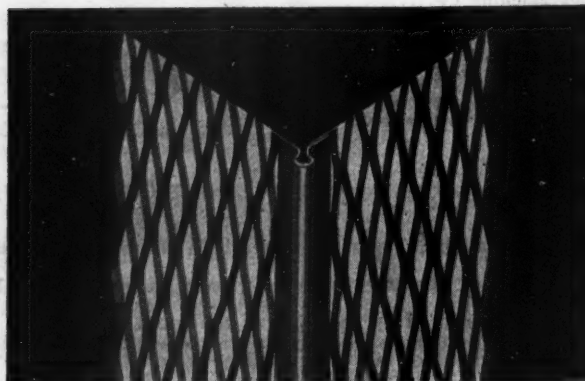
Eastern Plant: The Eller Manufacturing Co., Canton, Ohio.



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FOR BETTER PLASTERING

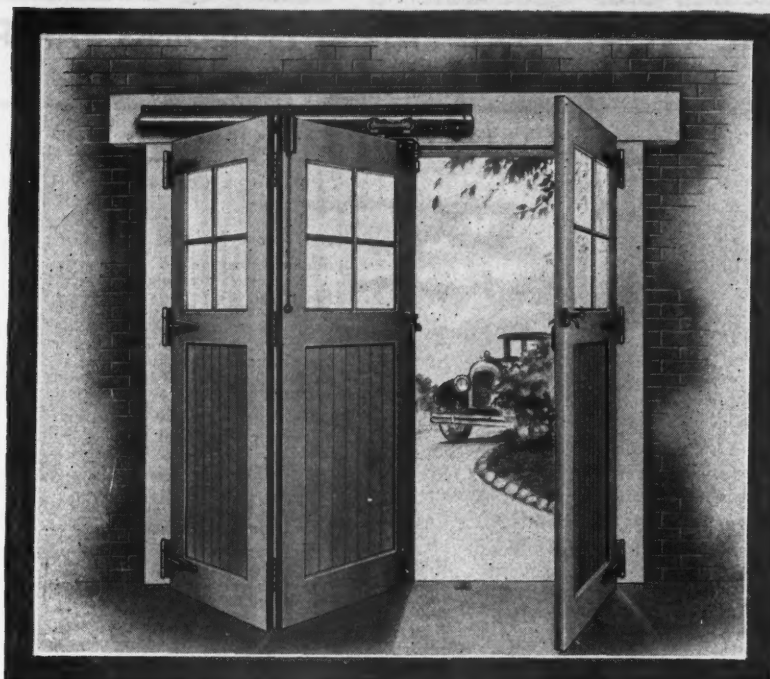
Real economies are possible through the simplicity of handling Milcor Expansion Corner Bead. It can be wired, stapled, nailed, or stuck to any kind of wall construction, without the use of clips. It permits the saving of much time compared with old style corner bead erected under old style methods. Milcor Expansion Corner Bead No. 1 is used for outer or exposed angles. It is made from No. 26 gauge and No. 24 gauge Tight Coat Galvanized Steel also in Copper and Zinc or Armco Ingot Iron. Always specify Milcor Expansion Corner Beads for fine interior finish.



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**You Can Avoid Unnecessary Expense  
by Installing This Set SPECIALLY  
Designed for Light Doors**



Inside Installation of No. 40 "EZ" Fixtures

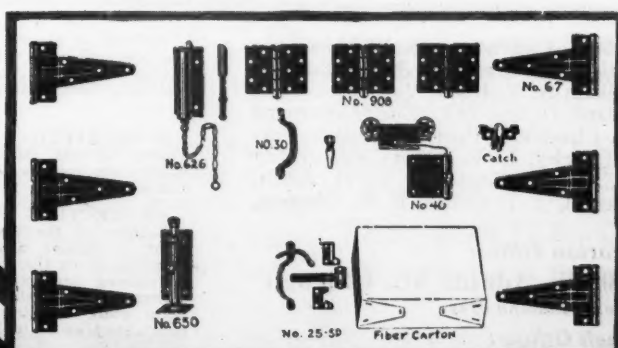
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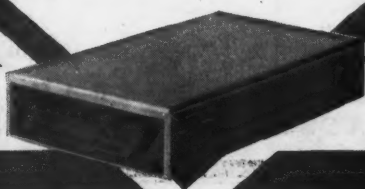
tures were designed SPECIALLY for light doors. With the use of them you are assured long, satisfactory service . . . just as you would be in the purchase of any Frantz Product. In addition, you will find considerable saving in the purchase of the No. 40 "EZ" SPECIAL Set. Write for details today! Dept. No. A-529

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Parts of a No. 40 "EZ" Garage Door Set



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